



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL  
LORAIN COUNTY**

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 02-21335**

**Fac ID: 0247171014**

**DATE: 1/12/2006**

Forest City Technologies, Plant 8  
Marshall Searles  
P.O. Box 86  
Wellington, OH 44090

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

CC: USEPA

NEDO



**Permit To Install  
Terms and Conditions**

**Issue Date: 1/12/2006  
Effective Date: 1/12/2006**

**FINAL PERMIT TO INSTALL 02-21335**

Application Number: 02-21335  
Facility ID: 0247171014  
Permit Fee: **\$2600**  
Name of Facility: Forest City Technologies, Plant 8  
Person to Contact: Marshall Searles  
Address: P.O. Box 86  
Wellington, OH 44090

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**22069 Fairgrounds Rd.  
Wellington, Ohio**

Description of proposed emissions unit(s):  
**9 dial coaters with ovens and 4 linear coaters with ovens.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. State and Federally Enforceable Permit-To-Install General Terms and Conditions

#### 1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to

the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
  - iv. If this permit is for an emissions unit located at a Title V facility, then each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## 2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

## 3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

#### 4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

#### 5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

#### 6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

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## **7. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

## **8. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

## **9. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or

required under this permit.

- iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

#### 10. Permit-To-Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

#### 11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

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**12. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

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### **13. Permit-To-Install**

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this permit.

## **B. State Only Enforceable Permit-To-Install General Terms and Conditions**

### **1. Compliance Requirements**

The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

### **2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

### **3. Permit Transfers**

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Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

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**4. Authorization To Install or Modify**

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**5. Construction of New Sources(s)**

This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

**6. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

**7. Applicability**

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

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**8. Construction Compliance Certification**

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the permit-to-install application and the terms and conditions of the permit-to-install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)**

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

**C. Permit-To-Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)  
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	29.8
Single HAP	9.9
Combined HAPs	24.9

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**Forest City Technologies, Plant 8**  
**PTI Application: 02-21225**  
**Issue:**

**Facility ID: 0247171014**

Emissions Unit ID: K001

**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

**A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions**

None

**B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
K001 - Dial coater no. 1 with natural gas oven equipped with a catalytic oxidizer	OAC rule 3745-21-09(B)(3)(m)
	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-21-09(B)(3)(n)
	OAC rule 3745-35-07

OAC rule 3745-21-09(B)(6)

OAC rule 3745-21-09(U)

OAC rule 3745-21-09(B)(3)(l)

**Fores****PTI A****Issued: 1/12/2006**

Emissions Unit ID: K001

Applicable Emissions  
Limitations/Control  
Measures

VOC emissions shall not exceed 0.43 pound per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b,

and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and A.V.2 below.

See A.I.2.b and A.I.2.c below.

**2. Additional Terms and Conditions**

- 2.a** The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K001) and emissions units K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013.
- 2.b** The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c** The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d** Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

**II. Operational Restrictions**

1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.

5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and

Emissions Unit ID: K001

monitoring equipment, when the associated emissions unit was in operation.

The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information for each day for this emissions unit (K001):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;

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- c. The VOC content of each coating, as applied, in pounds per gallons;
- d. The hours of operation; and
- e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.

9. The permittee shall collect and record the following information each month:
  - a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.

2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify each day where the hourly VOC emission rate exceeded 0.43 pound per hour for this emissions unit (K001). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such single HAP for each such month.

Emissions Unit ID: K001

6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.
7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K001) and emissions units K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:

VOC emissions shall not exceed 0.43 pound per hour.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:

VOC emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K001) and emissions units K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K001) and emissions units K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013, by 365 and dividing by 2000).

c. Emission Limitation:

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Emissions Unit ID: K001

Compliance shall be based upon the record keeping specified in Section AIII.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit (K001) and emissions units K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013 in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after installation of the emissions units.
  - b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
  - c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
    - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
    - ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

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Emissions Unit ID: K001

**VI. Miscellaneous Requirements**

None

Fores

PTI A

Issued: 1/12/2006

Emissions Unit ID: K001

**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K001 - Dial coater no. 1 with natural gas oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K001) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will 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.

**IV. Reporting Requirements**

None

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Emissions Unit ID: K001

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

Fores

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Emissions Unit ID: K002

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K002 - Dial coater no. 2 with natural gas oven equipped with a catalytic oxidizer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-09(B)(3)(l)
		OAC rule 3745-21-09(B)(3)(m)
		OAC rule 3745-21-09(B)(3)(n)
		OAC rule 3745-35-07
	OAC rule 3745-21-09(B)(6)	
	OAC rule 3745-21-09(U)	

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Emissions Unit ID: K002

Applicable Emissions  
Limitations/Control  
Measures

VOC emissions shall not exceed 0.29 pound per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b,

and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and A.V.2 below.

See A.I.2.b and A.I.2.c below.

**2. Additional Terms and Conditions**

- 2.a** The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K002) and emissions units K001, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013.
- 2.b** The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c** The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d** Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

**II. Operational Restrictions**

1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.

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5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information for each day for this emissions unit (K002):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;

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- c. The VOC content of each coating, as applied, in pounds per gallons; and
- d. The hours of operation; and
- e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.

9. The permittee shall collect and record the following information each month:
  - a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.

2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify each day where the hourly VOC emission rate exceeded 0.29 pound per hour for this emissions unit (K002). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such single HAP for each such month.

6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.
7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K002) and emissions units K001, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:

VOC emissions shall not exceed 0.29 pound per hour.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:

VOC emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K002) and emissions units K001, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K002) and emissions units K001, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013, by 365 and dividing by 2000).

c. Emission Limitation:

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Emissions Unit ID: K002

Compliance shall be based upon the record keeping specified in Section AIII.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit (K002) and emissions units K001, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013 in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after installation of the emissions units.
  - b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
  - c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
    - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
    - ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

**Forest City Technologies, Plant 8**  
**PTI Application: 02-21225**  
**Issue:**

**Facility ID: 0247171014**

Emissions Unit ID: K002

**VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K002 - Dial coater no. 2 with natural gas oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K002) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

**Forest City Technologies, Plant 8**

**PTI Application: 02-21225**

**Issue:**

**Facility ID: 0247171014**

Emissions Unit ID: K002

- 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.

#### **IV. Reporting Requirements**

None

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**Fores**

**PTI A**

**Issued: 1/12/2006**

Emissions Unit ID: K002

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K003 - Dial coater no. 3 with natural gas oven equipped with a catalytic oxidizer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-09(B)(3)(l)
		OAC rule 3745-21-09(B)(3)(m)
		OAC rule 3745-21-09(B)(3)(n)
		OAC rule 3745-35-07
	OAC rule 3745-21-09(B)(6)	
	OAC rule 3745-21-09(U)	

**Fores**

**PTI A**

**Issued: 1/12/2006**

Emissions Unit ID: K003

Applicable Emissions  
Limitations/Control  
Measures

VOC emissions shall not exceed 0.86 pound per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b,

and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and A.V.2 below.

See A.I.2.b and A.I.2.c below.

**2. Additional Terms and Conditions**

- 2.a** The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K003) and emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013.
- 2.b** The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c** The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d** Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

**II. Operational Restrictions**

1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.

5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information for each day for this emissions unit (K003):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;

**Forest City Technologies, Plant 8**

**PTI Application: 02-21225**

**Issue:**

**Facility ID: 0247171014**

Emissions Unit ID: K003

- c. The VOC content of each coating, as applied, in pounds per gallons;
- d. The hours of operation; and
- e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.

9. The permittee shall collect and record the following information each month:
  - a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.

2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify each day where the hourly VOC emission rate exceeded 0.86 pound per hour for this emissions unit (K003). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such single HAP for each such month.

6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.
7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K003) and emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:

VOC emissions shall not exceed 0.86 pound per hour.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:

VOC emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

Emissions Unit ID: K003

Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K003) and emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K003) and emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010, K011, K012, and K013, by 365 and dividing by 2000).

c. Emission Limitation:

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit (K003) and emissions units K001, K002, K004, K005, K006, K007, K008, K009, K010,

K011, K012, and K013 in accordance with the following requirements:

- a. The emission testing shall be conducted within 6 months after installation of the emissions units.
- b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
- c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
  - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
  - ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

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**Forest City Technologies, Plant 8**  
**PTI Application: 02-21225**  
**Issue**

**Facility ID: 0247171014**

Emissions Unit ID: K003

**VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K003 - Dial coater no. 3 with natural gas oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K003) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

**Forest City Technologies, Plant 8**

**PTI Application: 02-21225**

**Issue:**

**Facility ID: 0247171014**

Emissions Unit ID: K003

- 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.

#### **IV. Reporting Requirements**

None

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**Fores**

**PTI A**

**Issued: 1/12/2006**

Emissions Unit ID: K003

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K004 - Dial coater no. 4 with electric oven equipped with a catalytic oxidizer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-09(B)(3)(l)
		OAC rule 3745-21-09(B)(3)(m)
		OAC rule 3745-21-09(B)(3)(n)
		OAC rule 3745-35-07
	OAC rule 3745-21-09(B)(6)	
	OAC rule 3745-21-09(U)	

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Emissions Unit ID: K004

Applicable Emissions  
Limitations/Control  
Measures

VOC emissions shall not exceed 0.86 pound per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b,

and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and A.V.2 below.

See A.I.2.b and A.I.2.c below.

**2. Additional Terms and Conditions**

- 2.a** The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K004) and emissions units K001, K002, K003, K005, K006, K007, K008, K009, K010, K011, K012, and K013.
- 2.b** The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c** The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d** Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

**II. Operational Restrictions**

1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.

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5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

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3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information for each day for this emissions unit (K004):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;
  - c. The VOC content of each coating, as applied, in pounds per gallons;
  - d. The hours of operation; and
  - e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control

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efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.

9. The permittee shall collect and record the following information each month:
  - a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.

Emissions Unit ID: K004

2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify each day where the hourly VOC emission rate exceeded 0.86 pound per hour for this emissions unit (K004). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such single HAP for each such month.
6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.

7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K004) and emissions units K001, K002, K003, K005, K006, K007, K008, K009, K010, K011, K012, and K013; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
  
VOC emissions shall not exceed 0.86 pound per hour.  
  
Applicable Compliance Method:  
  
Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:  
  
VOC emissions shall not exceed 29.8 tons per year.  
  
Applicable Compliance Method:

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Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K004) and emissions units K001, K002, K003, K005, K006, K007, K008, K009, K010, K011, K012, and K013, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K004) and emissions units K001, K002, K003, K005, K006, K007, K008, K009, K010, K011, K012, and K013, by 365 and dividing by 2000).

c. Emission Limitation:

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit (K004) and emissions units K001, K002, K003, K005, K006, K007, K008, K009, K010,

K011, K012, and K013 in accordance with the following requirements:

- a. The emission testing shall be conducted within 6 months after installation of the emissions units.
- b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
- c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
  - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
  - ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

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**VI. Miscellaneous Requirements**

None

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**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K004 - Dial coater no. 4 with electric oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K004) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

Emissions Unit ID: K004

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will 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.

**IV. Reporting Requirements**

None

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**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K005 - Dial coater no. 5 with natural gas oven equipped with a catalytic oxidizer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-09(B)(3)(l)
		OAC rule 3745-21-09(B)(3)(m)
		OAC rule 3745-21-09(B)(3)(n)
		OAC rule 3745-35-07
	OAC rule 3745-21-09(B)(6)	
	OAC rule 3745-21-09(U)	

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Emissions Unit ID: K005

Applicable Emissions  
Limitations/Control  
Measures

VOC emissions shall not exceed 1.14 pounds per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b,

and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and A.V.2 below.

See A.I.2.b and A.I.2.c below.

Emissions Unit ID: K005

## 2. Additional Terms and Conditions

- 2.a The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K005) and emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, K011, K012, and K013.
- 2.b The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

## II. Operational Restrictions

- 1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
- 2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
- 3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
- 4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.
- 5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of

leaks and holes that would permit the escape of the captured VOC emissions.

6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

Emissions Unit ID: K005

3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information for each day for this emissions unit (K005):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;
  - c. The VOC content of each coating, as applied, in pounds per gallons;
  - d. The hours of operation; and
  - e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control

efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.

9. The permittee shall collect and record the following information each month:
  - a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.
2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which

the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and

- c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify each day where the hourly VOC emission rate exceeded 1.14 pounds per hour for this emissions unit (K005). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such single HAP for each such month.
6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.

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7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K005) and emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, K011, K012, and K013; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:
 

VOC emissions shall not exceed 1.14 pounds per hour.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:
 

VOC emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K005) and emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010, K011, K012, and K013, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K005) and emissions units K001, K002, K003, K004, K006,

K007, K008, K009, K010, K011, K012, and K013, by 365 and dividing by 2000).

c. Emission Limitation:

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit (K005) and emissions units K001, K002, K003, K004, K006, K007, K008, K009, K010,

K011, K012, and K013 in accordance with the following requirements:

- a. The emission testing shall be conducted within 6 months after installation of the emissions units.
- b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
- c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
  - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
  - ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

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**Fores**

**PTI A**

**Issued: 1/12/2006**

Emissions Unit ID: K005

**VI. Miscellaneous Requirements**

None

Fores

PTI A

Issued: 1/12/2006

Emissions Unit ID: K005

**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K005 - Dial coater no. 5 with natural gas oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K005) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

Emissions Unit ID: K005

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will 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.

#### **IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K006 - Dial coater no. 6 with natural gas oven equipped with a catalytic oxidizer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-09(B)(3)(l)
		OAC rule 3745-21-09(B)(3)(m)
		OAC rule 3745-21-09(B)(3)(n)
		OAC rule 3745-35-07
	OAC rule 3745-21-09(B)(6)	
	OAC rule 3745-21-09(U)	

Applicable Emissions  
Limitations/Control  
Measures

A.V.2 below.

See A.I.2.b and A.I.2.c below.

VOC emissions shall not exceed 0.86 pound per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b, and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and

**2. Additional Terms and Conditions**

- 2.a** The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K006) and emissions units K001, K002, K003, K004, K005, K007, K008, K009, K010, K011, K012, and K013.
- 2.b** The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c** The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d** Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

**II. Operational Restrictions**

1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.

5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and

Emissions Unit ID: K006

monitoring equipment, when the associated emissions unit was in operation.

The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information for each day for this emissions unit (K006):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;

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- c. The VOC content of each coating, as applied, in pounds per gallons;
- d. The hours of operation; and
- e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.

9. The permittee shall collect and record the following information each month:
  - a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.

2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify each day where the hourly VOC emission rate exceeded 0.86 pound per hour for this emissions unit (K005). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such single HAP for each such month.

6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.
7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K006) and emissions units K001, K002, K003, K004, K005, K007, K008, K009, K010, K011, K012, and K013; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:

VOC emissions shall not exceed 0.86 pound per hour.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:

VOC emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K006) and emissions units K001, K002, K003, K004, K005, K007, K008, K009, K010, K011, K012, and K013, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K006) and emissions units K001, K002, K003, K004, K005, K007, K008, K009, K010, K011, K012, and K013, by 365 and dividing by 2000).

c. Emission Limitation:

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Emissions Unit ID: K006

Compliance shall be based upon the record keeping specified in Section AIII.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit (K006) and emissions units K001, K002, K003, K004, K005, K007, K008, K009, K010, K011, K012, and K013 in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after installation of the emissions units.
  - b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
  - c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
    - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
    - ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

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Emissions Unit ID: K006

**VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K006 - Dial coater no. 6 with natural gas oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K006) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will 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.

**IV. Reporting Requirements**

None

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**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K007 - Dial coater no. 7 with electric oven equipped with a catalytic oxidizer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-09(B)(3)(l)
		OAC rule 3745-21-09(B)(3)(m)
		OAC rule 3745-21-09(B)(3)(n)
		OAC rule 3745-35-07
	OAC rule 3745-21-09(B)(6)	
	OAC rule 3745-21-09(U)	

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Applicable Emissions  
Limitations/Control  
Measures

VOC emissions shall not exceed 0.57 pound per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b,

and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and A.V.2 below.

See A.I.2.b and A.I.2.c below.

**2. Additional Terms and Conditions**

- 2.a** The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K007) and emissions units K001, K002, K003, K004, K005, K006, K008, K009, K010, K011, K012, and K013.
- 2.b** The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c** The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d** Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

**II. Operational Restrictions**

- 1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
- 2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
- 3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
- 4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.

5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information each day for this emissions unit (K007):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;

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- c. The VOC content of each coating, as applied, in pounds per gallons;
- d. The hours of operation; and
- e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.

9. The permittee shall collect and record the following information each month:
- a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.

2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify for each day where the hourly VOC emission rate exceeded 0.57 pound per hour for this emissions unit (K007). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of

Emissions Unit ID: K007

each such single HAP for each such month.

6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.
7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K007) and emissions units K001, K002, K003, K004, K005, K006, K008, K009, K010, K011, K012, and K013; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:

VOC emissions shall not exceed 0.57 pound per hour.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:

VOC emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K007) and emissions units K001, K002, K003, K004, K005, K006, K008, K009, K010, K011, K012, and K013, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K007) and emissions units K001, K002, K003, K004, K005, K006, K008, K009, K010, K011, K012, and K013, by 365 and dividing by 2000).

c. Emission Limitation:

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Emissions Unit ID: K007

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section AIII.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit (K007) and emissions units K001, K002, K003, K004, K005, K006, K008, K009, K010, K011, K012, and K013 in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after installation of the emissions units.
  - b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
  - c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
    - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
    - ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Offices's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

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**VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K007 - Dial coater no. 7 with electric oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K007) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

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- 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.

**IV. Reporting Requirements**

None

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Emissions Unit ID: K007

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K008 - Dial coater no. 8 with electric oven equipped with a catalytic oxidizer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-09(B)(3)(l)
		OAC rule 3745-21-09(B)(3)(m)
		OAC rule 3745-21-09(B)(3)(n)
		OAC rule 3745-35-07
	OAC rule 3745-21-09(B)(6)	
	OAC rule 3745-21-09(U)	

**Fores****PTI A****Issued: 1/12/2006**

Emissions Unit ID: K008

Applicable Emissions  
Limitations/Control  
Measures

VOC emissions shall not exceed 0.57 pound per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b,

and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and A.V.2 below.

See A.I.2.b and A.I.2.c below.

**2. Additional Terms and Conditions**

- 2.a** The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K008) and emissions units K001, K002, K003, K004, K005, K006, K007, K009, K010, K011, K012, and K013.
- 2.b** The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c** The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d** Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

**II. Operational Restrictions**

- 1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
- 2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
- 3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
- 4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.

5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information for each day for this emissions unit (K008):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;

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- c. The VOC content of each coating, as applied, in pounds per gallons;
- d. The hours of operation; and
- e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.

9. The permittee shall collect and record the following information each month:
- a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.

2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify each day where the hourly VOC emission rate exceeded 0.57 pound per hour for this emissions unit (K008). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of

Emissions Unit ID: K008

each such single HAP for each such month.

6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.
7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K008) and emissions units K001, K002, K003, K004, K005, K006, K007, K009, K010, K011, K012, and K013; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:
 

VOC emissions shall not exceed 0.57 pound per hour.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:
 

VOC emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

Emissions Unit ID: K008

Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K008) and emissions units K001, K002, K003, K004, K005, K006, K007, K009, K010, K011, K012, and K013, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K008) and emissions units K001, K002, K003, K004, K005, K006, K007, K009, K010, K011, K012, and K013, by 365 and dividing by 2000).

c. Emission Limitation:

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit

(K008) and emissions units K001, K002, K003, K004, K005, K006, K007, K009, K010, K011, K012, and K013 in accordance with the following requirements:

- a. The emission testing shall be conducted within 6 months after installation of the emissions units.
- b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
- c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
  - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
  - ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Offices's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

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**VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K008 - Dial coater no. 8 with electric oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K008) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

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Emissions Unit ID: K008

- 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.

**IV. Reporting Requirements**

None

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Emissions Unit ID: K008

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K009 - Dial coater no. 9 with natural gas oven equipped with a catalytic oxidizer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-09(B)(3)(l)
		OAC rule 3745-21-09(B)(3)(m)
		OAC rule 3745-21-09(B)(3)(n)
		OAC rule 3745-35-07
	OAC rule 3745-21-09(B)(6)	
	OAC rule 3745-21-09(U)	

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Emissions Unit ID: K009

Applicable Emissions  
Limitations/Control  
Measures

VOC emissions shall not exceed 0.57 pound per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b,

and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and A.V.2 below.

See A.I.2.b and A.I.2.c below.

**2. Additional Terms and Conditions**

- 2.a** The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K009) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K010, K011, K012, and K013.
- 2.b** The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c** The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d** Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

**II. Operational Restrictions**

1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.

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5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

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3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information for each day for this emissions unit (K009):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;
  - c. The VOC content of each coating, as applied, in pounds per gallons;
  - d. The hours of operation; and
  - e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control

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efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.

9. The permittee shall collect and record the following information each month:
  - a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.

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2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify each day where the hourly VOC emission rate exceeded 0.57 pound per hour for this emissions unit (K009). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such single HAP for each such month.
6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.

7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K009) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K010, K011, K012, and K013; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
  
VOC emissions shall not exceed 0.57 pound per hour.  
  
Applicable Compliance Method:  
  
Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:  
  
VOC emissions shall not exceed 29.8 tons per year.  
  
Applicable Compliance Method:

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Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K009) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K010, K011, K012, and K013, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K009) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K010, K011, K012, and K013, by 365 and dividing by 2000).

c. Emission Limitation:

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit (K009) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K010,

K011, K012, and K013 in accordance with the following requirements:

- a. The emission testing shall be conducted within 6 months after installation of the emissions units.
- b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
- c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
  - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
  - ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

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**VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K009 - Dial coater no. 9 with natural gas oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K009) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

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TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will 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.

**IV. Reporting Requirements**

None

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**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K010 - Linear coater no. 1 with electric oven equipped with a catalytic oxidizer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-09(B)(3)(l)
		OAC rule 3745-21-09(B)(3)(m)
		OAC rule 3745-21-09(B)(3)(n)
		OAC rule 3745-35-07
	OAC rule 3745-21-09(B)(6)	
	OAC rule 3745-21-09(U)	

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Applicable Emissions  
Limitations/Control  
Measures

VOC emissions shall not exceed 0.17 pound per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b,

and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and A.V.2 below.

See A.I.2.b and A.I.2.c below.

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## 2. Additional Terms and Conditions

- 2.a The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K010) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K011, K012, and K013.
- 2.b The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

## II. Operational Restrictions

- 1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
- 2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
- 3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
- 4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.
- 5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of

leaks and holes that would permit the escape of the captured VOC emissions.

6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

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3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information for each day for this emissions unit (K010):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;
  - c. The VOC content of each coating, as applied, in pounds per gallons;
  - d. The hours of operation; and
  - e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control

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efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.

9. The permittee shall collect and record the following information each month:
  - a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.
2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which

the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and

- c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify each day where the hourly VOC emission rate exceeded 0.17 pound per hour for this emissions unit (K010). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such single HAP for each such month.
6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.

Emissions Unit ID: K010

7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K010) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K011, K012, and K013; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:
 

VOC emissions shall not exceed 0.17 pound per hour.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:
 

VOC emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K010) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K011, K012, and K013, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K010) and emissions units K001, K002, K003, K004, K005,

K006, K007, K008, K009, K011, K012, and K013, by 365 and dividing by 2000).

c. Emission Limitation:

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit (K010) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009,

K011, K012, and K013 in accordance with the following requirements:

- a. The emission testing shall be conducted within 6 months after installation of the emissions units.
- b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
- c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
  - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
  - ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

Emissions Unit ID: K010

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

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**Issued: 1/12/2006**

Emissions Unit ID: K010

**VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K010 - Linear coater no. 1 with electric oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K010) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

Emissions Unit ID: K010

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will 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.

**IV. Reporting Requirements**

None

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Emissions Unit ID: K010

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K011 - Linear coater no. 2 with electric oven equipped with a catalytic oxidizer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-09(B)(3)(l)
		OAC rule 3745-21-09(B)(3)(m)
		OAC rule 3745-21-09(B)(3)(n)
		OAC rule 3745-35-07
	OAC rule 3745-21-09(B)(6)	
	OAC rule 3745-21-09(U)	

**Forest City Technologies, Plant 8**

PTI Application: 02-21225

**Issue**

Facility ID: 0247171014

Emissions Unit ID: K011

Applicable Emissions  
Limitations/Control  
Measures

VOC emissions shall not exceed 0.29 pound per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b, and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and

A.V.2 below.

See A.I.2.b and A.I.2.c below.

**2. Additional Terms and Conditions**

- 2.a** The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K011) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K012, and K013.
- 2.b** The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c** The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d** Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

**II. Operational Restrictions**

1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.

5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and

Emissions Unit ID: K011

monitoring equipment, when the associated emissions unit was in operation.

The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information for each day for this emissions unit (K011):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;

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- c. The VOC content of each coating, as applied, in pounds per gallons;
- d. The hours of operation; and
- e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.

9. The permittee shall collect and record the following information each month:
  - a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.

2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify each day where the hourly VOC emission rate exceeded 0.29 pound per hour for this emissions unit (K011). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such single HAP for each such month.

6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.
7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K011) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K012, and K013; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:

VOC emissions shall not exceed 0.29 pound per hour.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:

VOC emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K011) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K012, and K013, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K011) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K012, and K013, by 365 and dividing by 2000).

c. Emission Limitation:

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Emissions Unit ID: K011

Compliance shall be based upon the record keeping specified in Section AIII.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit (K011) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K012, and K013 in accordance with the following requirements:
  - a. The emission testing shall be conducted within 6 months after installation of the emissions units.
  - b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
  - c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
    - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
    - ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

**Forest City Technologies, Plant 8**  
**PTI Application: 02-21225**  
**Issue**

**Facility ID: 0247171014**

Emissions Unit ID: K011

**VI. Miscellaneous Requirements**

None

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K011 - Linear coater no. 2 with electric oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K011) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will 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.

**IV. Reporting Requirements**

None

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**Forest City Technologies, Plant 8**  
**PTI Application: 02-21225**  
**Issue**

**Facility ID: 0247171014**

Emissions Unit ID: K011

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

Fores

PTI A

Issued: 1/12/2006

Emissions Unit ID: K012

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. State and Federally Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K012 - Linear coater no. 3 with electric oven equipped with a catalytic oxidizer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-09(B)(3)(l)
		OAC rule 3745-21-09(B)(3)(m)
		OAC rule 3745-21-09(B)(3)(n)
		OAC rule 3745-35-07
	OAC rule 3745-21-09(B)(6)	
	OAC rule 3745-21-09(U)	

**Fores**

**PTI A**

**Issued: 1/12/2006**

Emissions Unit ID: K012

Applicable Emissions  
Limitations/Control  
Measures

VOC emissions shall not exceed 0.114 pound per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b,

and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and A.V.2 below.

See A.I.2.b and A.I.2.c below.

**2. Additional Terms and Conditions**

- 2.a** The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K012) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, and K013.
- 2.b** The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c** The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d** Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

**II. Operational Restrictions**

- 1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
- 2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
- 3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
- 4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.

5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information for each day for this emissions unit (K012):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;

Emissions Unit ID: K012

- c. The VOC content of each coating, as applied, in pounds per gallons;
  - d. The hours of operation; and
  - e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.
9. The permittee shall collect and record the following information each month:
- a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.
2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify each day where the hourly VOC emission rate exceeded 0.114 pound per hour for this emissions unit (K012). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month

Emissions Unit ID: K012

during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such single HAP for each such month.

6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.
7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K012) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, and K013; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
  
VOC emissions shall not exceed 0.114 pound per hour.  
  
Applicable Compliance Method:  
  
Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:  
  
VOC emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K012) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, and K013, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K012) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, and K013, by 365 and dividing by 2000).

c. Emission Limitation:

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit (K012) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, and K013 in accordance with the following requirements:
- a. The emission testing shall be conducted within 6 months after installation of the emissions units.
  - b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
  - c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
    - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and

- ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Offices's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

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A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

**VI. Miscellaneous Requirements**

None

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Issued: 1/12/2006

Emissions Unit ID: K012

**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K012 - Linear coater no. 3 with electric oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

**2.a** None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K012) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

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Emissions Unit ID: K012

- 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.

**IV. Reporting Requirements**

None

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Emissions Unit ID: K012

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
K013 - Linear coater no. 4 with electric oven equipped with a catalytic oxidizer	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-09(B)(3)(l)
		OAC rule 3745-21-09(B)(3)(m)
		OAC rule 3745-21-09(B)(3)(n)
		OAC rule 3745-35-07
	OAC rule 3745-21-09(B)(6)	
	OAC rule 3745-21-09(U)	

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Applicable Emissions  
Limitations/Control  
Measures

VOC emissions shall not exceed 0.114 pound per hour.

VOC emissions shall not exceed 29.8 tons per year. See A.I.2.a below.

90 percent overall reduction of VOCs by weight.

See A.I.2.d below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(B)(6).

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

In lieu of complying with the requirements of this rule, the permittee has opted to comply with the requirements of OAC rule 3745-31-05(A)(3).

See A.III.2.a, A.III.2.b,

and A.III.2.c below.

See A.IV.2.a, A.IV.2.b, and A.IV.2.c below.

See A.III.1, A.V.1.c, and A.V.2 below.

See A.I.2.b and A.I.2.c below.

**2. Additional Terms and Conditions**

- 2.a** The emission limitation of 29.8 tons VOC per year is based upon the combined annual emissions from this emissions unit (K013) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, and K012.
- 2.b** The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- 2.c** The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- 2.d** Based upon the permittee's application, there are no cleanup materials associated with this emissions unit.

**II. Operational Restrictions**

1. Exhaust gases from operation of the emissions unit shall be vented to the catalytic oxidizer.
2. The average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The catalytic oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The VOC conversion efficiency of the catalyst in the catalytic oxidizer, as determined by the catalyst activity testing shall be at least 90% at a test temperature that is representative of the normal temperature at the catalyst bed inlet. Solvent loading during catalyst analysis shall be consistent with the test laboratory's normal testing protocol.
4. All ventilation fans associated with this emissions unit and the catalytic oxidizer shall be in operation at all times when this emissions unit is in operation.

5. When employing the catalytic oxidizer, all bypass dampers, actuator pins, and associated motors shall be in the correct position and in good operating condition at all times when this emissions unit is in operation to ensure that all captured VOC emissions are vented to the catalytic oxidizer. Also, all the hooding and ductwork comprising the VOC emission capture system for this emissions unit shall be free of leaks and holes that would permit the escape of the captured VOC emissions.
6. The average, total exhaust flow rate from this emissions unit to the catalytic oxidizer shall be within 25% of the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.

### **III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall operate and maintain continuous monitors and recorder(s) which measure and record the temperature immediately upstream and downstream of the incinerator's catalyst bed 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.
2. The permittee shall collect and record the following information each day:
  - a. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
  - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance. The permittee may use the oxidizer's temperature chart to determine the temperature differential across the catalyst bed.
  - c. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation. The permittee may use the current temperature chart as the log documenting that the monitoring equipment and control device are operating. Each bypass of the collection system and/or control device shall be logged as to the date and time.

3. The permittee shall perform an inspection of the catalytic oxidizer, including the catalyst bed, at least once each calendar year. 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 checks of associated equipment, including but not limited to burners, controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment shall be performed as determined by the inspection. In accordance with the testing schedule in Section A.V, a sample of catalyst material shall be collected from the catalyst bed to perform the catalyst activity tests required in Section A.V.
4. The permittee shall maintain a record of the results of each annual inspection of the catalytic oxidizer, as well as the results of each catalyst activity test required in Section A.V. These records shall be maintained at the facility for a period of five (5) years.
5. The permittee shall operate and maintain a flow meter at the inlet to the catalytic oxidizer to ensure that the exhaust from the coating room and the emissions units in the coating room are being directed to the catalytic oxidizer. The permittee shall collect and record the flow rate at the inlet to the catalytic oxidizer on a daily basis.
6. Each calendar month, the permittee shall inspect the operational condition and integrity of each ventilation fan comprising the capture system. Ventilation fan observations shall include visual inspections of the fan wheel, belts, and bearings. Lubrication of bearings and replacement of parts shall occur as necessary. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
7. Each calendar month, the permittee shall inspect the operational condition and integrity of all hooding, ductwork, and bypass dampers comprising the capture system. Hooding and ductwork observations shall include visual inspections to verify that the damper setting is in the correct position (i.e., to oxidizer or to atmosphere) and visual inspections of the actuator and motor to verify that the actuator pin and the motor are operating properly. The permittee shall document the results of all monthly inspections, including any corrective actions taken.
8. The permittee shall collect and record the following information for each day for this emissions unit (K013):
  - a. The name and identification number of each coating, as applied;
  - b. The volume in gallons of each coating, as applied;

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- c. The VOC content of each coating, as applied, in pounds per gallons;
- d. The hours of operation; and
- e. The total VOC emissions from all coatings employed, in pound(s) per hour {summation of [(b x c)/d] for all coatings multiplied by the overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established}.

9. The permittee shall collect and record the following information each month:
  - a. For all coating lines at the facility, including all de minimis and exempt coating lines:
    - i. The name and identification number of each coating, as applied;
    - ii. The volume in gallons of each coating, as applied;
    - iii. The individual HAP content for each HAP in each coating, as applied, in pounds per gallon; and
    - iv. The total HAP emissions for all coating lines of each single HAP [summation of (ii x iii) for all coatings; for coating lines with control equipment (ii x iii) shall be multiplied by the overall control efficiency determined during the most recent emission test that demonstrated that the source was in compliance or (1 - 0.90) until such time the overall control efficiency is established and added to the total sum of HAP emissions].
  - b. For all combustion sources of HAPs at the facility:
    - i. The total volume of natural gas burned; and
    - ii. The total HAP emissions calculated using emission factors from AP-42, Section 1.4, 7/98 or any later edition. It is also acceptable for the permittee to establish emission factors for each combustion source through emission testing witnessed by the Ohio EPA Northeast District Office and use those emission factors to calculate HAP emissions.

The total combined HAP emissions for all emissions units of each single HAP and total combined HAPs (summation of A.III.9.a.iv for all HAPs emitted by the coating lines and A.III.9.b.ii for all HAP emissions from combustion sources).

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and was not vented to the catalytic oxidizer.

2. The permittee shall submit quarterly summaries of the following records:
  - a. a log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit;
  - b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed (as determined by the continuous temperature monitor) did not comply with the temperature limitation specified above; and
  - c. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed (as determined by the continuous temperature monitor) was less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.

NOTE: Information submitted pursuant to Section A.IV.2.c is not relevant for determining compliance with any operational restriction contained in Section A.II. As long as the permittee performs the monitoring, record keeping, and reporting specified in Section A.III.2.b and A.IV.2.c of these terms and conditions, an average temperature difference across the catalyst bed of less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance shall not constitute a violation of any operational restriction or be considered a deviation.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when the emissions unit was in operation and the daily average air flow rate in the inlet stack to the catalytic oxidizer was more than 25% less than the mean average stack gas velocity during the most recent compliance test that demonstrated the emissions unit was in compliance with the applicable capture efficiency limitation.
4. The permittee shall submit deviation (excursion) reports which identify each day where the hourly VOC emission rate exceeded 0.114 pound per hour for this emissions unit (K013). The notification shall include a copy of such record and shall be sent to the Ohio EPA Northeast District Office within 30 days after the exceedance occurs.
5. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of any single HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such single HAP for each such month.

6. The permittee shall submit deviation (excursion) reports which identify each month during which the rolling, 12-month emissions of combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of combined HAPs for each such month.
7. The permittee shall submit annual reports which specify the actual annual VOC emissions for this emissions unit (K013) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, and K012; combined. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
8. The permittee shall submit annual reports which summarize the facility-wide emissions of each single HAP and combined HAPs from all emissions units at the facility. The reports shall include emission calculations, be submitted by January 31 of each year, and cover the previous calendar year.
9. The permittee shall submit annual reports which summarize the results of the annual inspections conducted on the catalytic oxidizer by the manufacturer's representative. The reports shall describe any maintenance conducted on the catalytic oxidizer as a direct result of the inspections by the manufacturer's representative. The reports shall be submitted by January 31 of each year and cover the previous calendar year.
10. The permittee shall submit reports that include the results of the catalyst activity tests required in Section A.V. These reports shall be submitted within 45 days after each catalyst activity test is performed.

## **V. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:

VOC emissions shall not exceed 0.114 pound per hour.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.8 of these terms and conditions.
  - b. Emission Limitation:

VOC emissions shall not exceed 29.8 tons per year.

Applicable Compliance Method:

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Compliance with the annual emission limitation is shown as long as compliance with the daily emission limitations for this emissions unit (K013) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, and K012, are maintained (the annual emission limitation was calculated by multiplying the sum of the daily emission limitations for each day for this emissions unit (K013) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, and K012, by 365 and dividing by 2000).

c. Emission Limitation

90 percent overall reduction of VOCs by weight.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Methods 25, 25A, and 40 CFR Part 51, Appendix M, Method 204. Performance testing shall be in accordance with OAC rules 3745-21-10(C).

d. Emission Limitation:

The emissions of each single hazardous air pollutant (HAP) from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

e. Emission Limitation:

The emissions of the combined HAPs from emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009, K010, K011, K012, K013, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in Section A.III.9 of these terms and conditions.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit (K013) and emissions units K001, K002, K003, K004, K005, K006, K007, K008, K009,

K010, K011, and K012 in accordance with the following requirements:

- a. The emission testing shall be conducted within 6 months after installation of the emissions units.
- b. The emission testing shall be conducted to demonstrate compliance with the emission limitation of 90 percent overall reduction of VOCs by weight.
- c. The following test methods shall be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC:
  - i. Method 25 of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are greater than 50 ppm or Method 25A of 40 CFR Part 60, Appendix A, if the VOC concentrations as carbon in the outlet are less than 50 ppm; and
  - ii. Method 204 of 40 CFR Part 51, Appendix M.

Alternative US EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. Testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
3. The capture efficiency shall be determined using Method 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request for the use of an alternative method, including an evaluation of the applicability, necessity, and validity of the alternative method, and may approve its use, if such approval does not contravene any other applicable requirement).

The control or destruction efficiency defined as the percent reduction of 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 upon 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.

4. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast District Office shall be permitted to witness the test(s), 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or person(s) responsible for the test(s) and submitted to the Ohio EPA Northeast District Office 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 Ohio EPA Northeast District Office.

Failure to submit notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

5. US EPA Method 24 shall be used to determine the VOC contents of all the materials employed in this emissions unit.

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**VI. Miscellaneous Requirements**

None

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**B. State Only Enforceable Section****I. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
K013 - Linear coater no. 4 with electric oven equipped with a catalytic oxidizer	None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

1. The permit to install for this emissions unit (K013) was evaluated based on the actual materials (coatings) and 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 potentially 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" pollutant(s):

Pollutant: toluene

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.0

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 53.13

MAGLC (ug/m3): 4476

Physical changes to or changes in the method of operation of the emissions unit after its installation 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 be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install would not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

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- 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.

**IV. Reporting Requirements**

None

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**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

None