



8/20/2014

Certified Mail

Edward Daubenmire
Crown Cork and Seal
940 Mill Park Drive
Lancaster, OH 43130

No	TOXIC REVIEW
Yes	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
Yes	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0123010255
Permit Number: P0082486
Permit Type: Renewal
County: Fairfield

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 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. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging 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 Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-CDO



Response to Comments

Facility ID:	0123010255
Facility Name:	Crown Cork and Seal
Facility Description:	Crowns and closures
Facility Address:	940 Mill Park Drive Lancaster, OH 43130-9576 Fairfield County
Permit:	P0082486, Permit-To-Install and Operate - Renewal
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the Lancaster Eagle Gazette on 07/05/2014. The comment period ended on 08/04/2014.	
Hearing date (if held)	
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: None

- a. Comment: None
- b. Response: None



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Crown Cork and Seal**

Facility ID:	0123010255
Permit Number:	P0082486
Permit Type:	Renewal
Issued:	8/20/2014
Effective:	8/20/2014
Expiration:	8/20/2019



Division of Air Pollution Control
Permit-to-Install and Operate
for
Crown Cork and Seal

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Final Permit-to-Install and Operate
Crown Cork and Seal
Permit Number: P0082486
Facility ID: 0123010255
Effective Date: 8/20/2014

Authorization

Facility ID: 0123010255
Application Number(s): A0012794
Permit Number: P0082486
Permit Description: FEPTIO renewal permit including administrative modification to incorporate federally enforceable limitations on the potential to emit for VOC emissions for two metal closure coating lines.
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 8/20/2014
Effective Date: 8/20/2014
Expiration Date: 8/20/2019
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Crown Cork and Seal
940 Mill Park Drive
Lancaster, OH 43130-9576

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

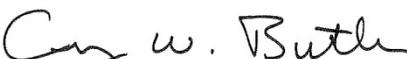
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049
(614)728-3778

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section 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 described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Director



Authorization (continued)

Permit Number: P0082486
 Permit Description: FEPTIO renewal permit including administrative modification to incorporate federally enforceable limitations on the potential to emit for VOC emissions for two metal closure coating lines.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Group Name: Coating line #2 and #3

Emissions Unit ID:	K004
Company Equipment ID:	Coating Line #2
Superseded Permit Number:	01-01310
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	K005
Company Equipment ID:	Coating/Print Line #3
Superseded Permit Number:	01-01310
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
Crown Cork and Seal
Permit Number: P0082486
Facility ID: 0123010255
Effective Date: 8/20/2014

A. Standard Terms and Conditions



1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.



10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the [DO/LAA] in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.



13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



Final Permit-to-Install and Operate

Crown Cork and Seal

Permit Number: P0082486

Facility ID: 0123010255

Effective Date: 8/20/2014

B. Facility-Wide Terms and Conditions



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

(1) 2. a)(1), 2. c)(1) & c)(2), 2. d)(2), and 2. e)(1)

2. Applicable Emissions Limitations and/or Control Requirements

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) (Synthetic minor to avoid major source status for HAPs)	See 2. a)(1)

a) Additional Terms and Conditions

(1) This permit establishes the following federally enforceable limitations on emissions of hazardous air pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act, for the purpose of avoiding Maximum Achievable Control Technology (MACT) regulations and Title V permitting requirements:

a. The actual emissions from emissions units K004, K005, and all other emission sources at the facility, including but not limited to any de minimis emissions units as defined in OAC rule 3745-15-05, or any registration status and/or permit exempt/permit-by-rule emissions units pursuant to OAC rule 3745-31-03, combined, shall not exceed 9.9 tons for any individual HAP, based upon a rolling, 12-month summation; and

b. The actual emissions from emissions units K004, K005, and all other emission sources at the facility, including but not limited to any de minimis emissions units as defined in OAC rule 3745-15-05, or any registration status and/or permit exempt/permit-by-rule emissions units pursuant to OAC rule 3745-31-03, combined, shall not exceed 24.9 tons for the combination of all HAPs, based upon a rolling, 12-month summation.

b) Operational Restrictions

(1) None.



c) **Monitoring and/or Recordkeeping Requirements**

(1) The permittee shall collect and record the following information for each month for emissions units K004 and K005:

- a. the name and identification number of each coating applied;
- b. the name and identification number of each cleanup material employed;
- c. the number of gallons of each coating applied;
- d. the number of gallons of each cleanup material employed;
- e. the individual HAP and combined HAP content of each coating applied, in pounds per gallon;
- f. the individual HAP and combined HAP content of each cleanup material employed, in pounds per gallon;
- g. the calculated, uncontrolled individual HAP and combined HAP emissions from all coatings applied;
- h. the calculated, uncontrolled individual HAP and combined HAP emissions from all cleanup materials employed;
- i. the calculated, uncontrolled individual HAP and combined HAP emissions;
- j. the total controlled emissions of each individual HAP from emissions units K004 and K005, in tons, using the overall control efficiency, as determined for the thermal incinerator(s) during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance;
- k. the total controlled emissions of combined HAPs from emissions units K004 and K005, in tons, using the overall control efficiency, as determined for the thermal incinerator(s) during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance; and,
- l. the calculated, controlled, rolling, 12-month individual HAP and combined HAP emissions from, in tons.

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act, or can be obtained by contacting the Central District Office.

(2) The permittee shall collect and record the following information each month for the purpose of demonstrating compliance with the facility-wide, federally enforceable restriction on the potential to emit for individual HAP and combined HAP emissions::

- a. the total uncontrolled emissions of each individual HAP from any de minimis emissions units as defined in OAC rule 3745-15-05, any registration status and/or permit exempt/permit-by-rule emissions units pursuant to OAC rule 3745-31-03, in tons, calculated in accordance with e)(1)a.;



- b. the total uncontrolled emissions of combined HAPs from any de minimis emissions units as defined in OAC rule 3745-15-05, any registration status and/or permit exempt/permit-by-rule emissions units pursuant to OAC rule 3745-31-03, in tons, calculated in accordance with e)(1)a.;
- c. the rolling, 12-month summation of the individual HAP emissions from all emissions units operating at the facility, in tons; and
- d. the rolling, 12-month summation of the total combined HAP emissions from all emissions units operating at the facility, in tons.

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act, or can be obtained by contacting the Central District Office.

d) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. any exceedance of the rolling, 12-month individual HAP emission limitation; and
 - ii. any exceedance of the rolling, 12-month total combined HAPs emission limitation.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

e) Testing Requirements

(1) Emissions Limitations:

Emissions of any individual HAP shall not exceed 9.9 tons per rolling, 12-month period.

Emissions of total combined HAPS shall not exceed 24.9 tons per rolling, 12-month period.



Final Permit-to-Install and Operate

Crown Cork and Seal

Permit Number: P0082486

Facility ID: 0123010255

Effective Date: 8/20/2014

Applicable Compliance Method:

- a. For any de minimis emissions units as defined in OAC rule 3745-15-05, any registration status and/or permit exempt/permit-by-rule emissions units pursuant to OAC rule 3745-31-03, the permittee shall calculate HAP emissions consistent with the information presented in the installation and/or operating permit application using U.S. EPA approved emissions factors or emissions factors otherwise approved by Central District Office.
- b. For emissions units K004 and K005 the permittee shall determine controlled HAP emissions using the actual HAP emissions values determined in accordance with c)(1).



Final Permit-to-Install and Operate

Crown Cork and Seal

Permit Number: P0082486

Facility ID: 0123010255

Effective Date: 8/20/2014

C. Emissions Unit Terms and Conditions



1. Emissions Unit Group -Coating line #2 and #3: K004,K005,

EU ID	Operations, Property and/or Equipment Description
K004	Metal Closure Coating Line No. 2 with Permanent Total Enclosure (PTE) vented to a combined Thermal Incinerator/Curing Oven (8.20 MMBtu)
K005	Metal Closure Coating Line No. 3 with Permanent Total Enclosure (PTE) vented to a combined Thermal Incinerator/Curing Oven (4.10 MMBtu)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. d)(10) through d)(12) and e)(4)g.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b., b)(2)a, b)(2)b, c)(2), d)(2), e)(3), f)(1)d., and f)(2)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<p>For K004, Volatile organic compound (VOC) emissions shall not exceed 19.6 pounds per hour (lbs/hr) from coatings and cleanup materials.</p> <p>For K005, VOC emissions shall not exceed 11.2 lbs/hr from coatings and cleanup materials.</p> <p>For K004, VOC emissions shall not exceed 1.01 lbs/gallon of coating solids applied.</p> <p>For K005, VOC emissions shall not exceed 1.17 lbs/gallon of coating solids applied.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Emissions from the combustion of natural gas in the curing oven/thermal incinerator serving emissions unit K004 shall not exceed the following:</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 0.80 lb/hr and 3.50 tons per year (TPY);</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.005 lb/hr and 0.02 TPY;</p> <p>Particulate emissions (PE) shall not exceed 0.06 lb/hr and 0.26 TPY;</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.67 lb/hr and 2.93 TPY; and</p> <p>VOC emissions shall not exceed 0.04 lb/hr and 0.18 TPY.</p> <p>Emissions from the combustion of natural gas in the curing oven/thermal incinerator serving emissions unit K005 shall not exceed the following:</p> <p>NO_x emissions shall not exceed 0.40 lb/hr and 1.75 TPY;</p> <p>SO₂ emissions shall not exceed 0.0024 lb/hr and 0.01 TPY;</p> <p>PE shall not exceed 0.03 lb/hr and 0.13 TPY;</p> <p>CO emissions shall not exceed 0.34 lb/hr and 1.49 TPY; and</p> <p>VOC emissions shall not exceed 0.02 lb/hr and 0.09 TPY.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A) and 3745-31-05(D).</p> <p>See b)(2)a. through b)(2)d.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Title V)	VOC emissions from K004 and K005 combined shall not exceed 74.0 tons per rolling, 12-month period. See b)(2)a., b)(2)b., and c)(2)
c.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. See c)(1)
d.	OAC rule 3745-21-09(B)(6) in lieu of OAC rule 3745-21-09(U)(1)	The VOC reduction requirements established by this rule are less stringent than the VOC reduction requirements established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	ORC 3704.03(F)(4)	See d)(10) through d)(12) and e)(4)g.

(2) Additional Terms and Conditions

- a. All of the VOC emissions from this emissions unit shall be vented to a thermal incinerator with a destruction removal efficiency (DRE) of at least 95%.
- b. The permanent total enclosure (PTE) serving this emissions unit shall be maintained in such a manner as to meet the criteria established for a permanent total enclosure in 40 CFR, Part 51, Appendix M, Reference Method 204, and shall capture all of the VOC emissions from this emissions unit.

The PTE shall be constructed to totally enclose the application stations, coating reservoirs, and all areas from the application station to the oven and the control device, such that all volatile organic compound emissions are captured, contained, and directed to the control device.

The PTE shall be maintained under negative pressure, at a minimum pressure differential that is not less than 0.013 mm Hg (0.007 in. H₂O), whenever the emissions unit is in operation.

- c. The hourly and annual emissions limitations associated with the natural gas combustion in the curing ovens/thermal incinerators serving emissions units K004 and K005 have been established to reflect the potential to emit for each pollutant. It is not necessary to establish monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.



- d. The hourly VOC emissions limitations for emissions units K004 and K005 were established to reflect the potential to emit for each emissions unit as vented to a thermal incinerator. The monitoring, recordkeeping, reporting, and testing requirements for the thermal incinerators, as established in the following terms and conditions, are sufficient to demonstrate compliance with these limitations.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in the curing oven/thermal incinerator serving this emissions unit.
- (2) The maximum combined coating and cleanup usage for emissions units K004 and K005 shall be limited by the following formula for each rolling 12-month period:

$$74.0 \text{ tons VOC} \geq \text{Total VOC emissions from coating and cleanup usage for emissions unit K004} + \text{Total VOC emissions from coating and cleanup usage for emissions unit K005}$$

The total VOC emissions from emissions units K004 and K005 shall be determined in accordance with d)(2) using the overall control efficiency, as determined for the thermal incinerator(s) during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each month for this emissions unit for the purpose of determining compliance with the VOC coating restriction:
 - a. the name and identification number of each coating applied;
 - b. for each coating, the calculation for the VOC content in pounds of VOC per gallon of coating solids and the record of each variable for each coating applied:

$$C_{VOC,2} = (D_C)(W_{VOC}) / (V_S + V_{VOC})$$

where:

$C_{VOC,2}$ = VOC content, in pounds of VOC per gallon of solids, excluding water and exempt solvents;

D_C = density of coating, in pounds of coating per gallon of coating;

$$W_{VOC} = W_{VM} - W_W - W_{ES};$$

W_{VM} = weight fraction of VOC in coating, in pound of VOC per pound of coating;

W_W = weight fraction of water in coating, in pound of water per pound of coating; and



W_{ES} = weight fraction of exempt solvent in coating, in pound of exempt solvent per pound of coating;

V_S = volume fraction of solids in coating, in gallon of solids per gallon of coating; and

$$V_{VOC} = V_{VM} - V_W - V_{ES}$$

V_{VM} = volume fraction of volatile matter in coating, in gallon of volatile matter per gallon of coating;

V_W = volume fraction of water in coating, in gallon of water per gallon of coating; and

V_{ES} = volume fraction of exempt solvent in coating, in gallon of exempt solvent per gallon of coating.

- c. the maximum VOC content per gallon of coating solids for all the coatings applied; **or**
- d. the volume-weighted average VOC content in pounds of VOC per gallon of coating solids of all the coatings applied, calculated as follows:

$$(C_{VOC,2})_A = \frac{\sum_{i=1}^n (C_{VOC,2i}) (L_{Ci}) (V_{Si} + V_{VOCi})}{\sum_{i=1}^n (L_{Ci}) (V_{Si} + V_{VOCi})}$$

where:

$C_{VOC,2}$ = VOC content in pounds of VOC per gallon of coating, excluding water and exempt solvents;

L_C = liquid volume of each coating employed during averaging period;

V_S = volume fraction of solids in coating, in gallon of solids per gallon of coating;

i = subscript denoting a specific coating employed during the averaging period;

A = subscript denoting that the indicated VOC content is a weighted average of the coatings employed during the averaging period; and

n = total number of coatings employed during the averaging period.

- e. the calculated, controlled VOC emission rate, in pounds of VOC per gallon of coating solids, as applied (the maximum VOC content of any coating applied or the daily volume-weighted average) using the overall control efficiency, as determined for the thermal incinerator during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance.



- (2) The permittee shall collect and record the following information for each month for emissions units K004 and K005 for the purpose of demonstrating compliance with the federally enforceable restriction on the potential to emit for VOC emissions:
- a. the name and identification number of each coating applied;
 - b. the name and identification number of each cleanup material employed;
 - c. the number of gallons of each coating applied;
 - d. the number of gallons of each cleanup material employed;
 - e. the VOC content of each coating applied, in pounds per gallon;
 - f. the VOC content of each cleanup material employed, in pounds per gallon;
 - g. the calculated, uncontrolled VOC emissions from all coatings applied;
 - h. the calculated, uncontrolled VOC emissions from all cleanup materials employed;
 - i. the calculated, uncontrolled VOC emissions from emissions units K004 and K005 combined;
 - j. the calculated, controlled, rolling, 12-month VOC emissions from emissions units K004 and K005 combined, in tons, using the overall control efficiency, as determined for the thermal incinerator(s) during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance;
 - k. if cleanup materials are collected for off-site disposal and/or recovery, the following records shall be maintained if a credit is to be applied to the monthly VOC emissions:
 - i. the amount of cleanup material recovered during the month* for off-site disposal and/or recovery, in gallons (or pounds, if records of recovered cleanup material is maintained by weight and VOC content in percent by weight);
 - ii. the VOC content of the recovered cleanup material shall be based on the lowest VOC content of any cleanup material collected, in pounds per gallon (or percent by weight); or it may be based upon a laboratory analyses provided by the facility to which the waste solvent is shipped;
 - iii. the date the recovered cleanup material was shipped, the amount shipped (minus the container), and the name and address of the receiving, disposal, and/or recovery facility; and
 - iv. the total monthly VOC emissions from cleanup operations, in pounds, i.e., $[d)(2)h.] - [d)(2)k.i. \times d)(2)k.ii.]$.

*A daily log may be required for recovered waste cleanup solvents, where a record of the monthly total volume or weight of the collected material cannot be



accurately maintained. This amount shall be adjusted if the volume or weight shipped is less than the sum of the monthly recovered solvent added to the container.

- (3) For each day during which the permittee burns a fuel other than natural gas in the curing oven/thermal incinerator serving this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned.
- (4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit(s) controlled by the thermal incinerator is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.
- (5) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal incinerator when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal incinerator was/were in operation, during which the average combustion temperature within the thermal incinerator was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and
 - b. a log or record of the operating time for the capture (collection) system, thermal incinerator, monitoring equipment, and the associated emissions unit(s).
- (6) Whenever the monitored average combustion temperature within the thermal incinerator deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
 - a. the date and time the deviation began;
 - b. the magnitude of the deviation at that time;
 - c. the date the investigation was conducted;
 - d. the name(s) of the personnel who conducted the investigation; and
 - e. the findings and recommendations.



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

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

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

- (7) The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.
- (8) The permittee shall measure, document/calculate, and maintain a permanent record of the following information for the permanent total enclosure, which may be the same record documented during the compliance test(s):
 - a. the measured diameter of each natural draft opening;
 - b. the distance measured from each natural draft opening to each VOC emitting point;
 - c. the total calculated surface area of all natural draft openings and the surface area of the enclosure's four walls, floor, and ceiling;
 - d. the calculation or demonstration that the distance from each VOC emitting point to each natural draft opening is at least 4 times the diameter of the opening; and
 - e. the calculation demonstrating that the sum of the surface areas of all of the natural draft openings to the enclosure is not more than 5 percent of the sum of the surface areas of the enclosure's four walls, floor, and ceiling.



- (9) The permittee shall install, operate, and maintain monitoring devices and a recorder that continuously monitor and record the differential pressure between the inside and outside of the permanent total enclosure when the emissions unit is in operation. The monitoring and recording devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals, with any modifications deemed necessary by the permittee.

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

- a. all three-hour blocks of time during which the difference in pressure between the permanent total enclosure and the surrounding areas is not maintained at or above the minimum pressure differential of 0.007 inches of water, as a three-hour average; and
 - b. a log or record of downtime for the capture (collection) system when the emissions unit was in operation.
- (10) The application for emissions units K004 and K005, were evaluated based on the actual materials and the design parameters of the emissions unit's(s) exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
 - b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).



- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., “X” hours per day and “Y” days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or “worst case” toxic contaminant(s):

Toxic Contaminant: xylene

TLV (mg/m³): 10.34

Maximum Hourly Emission Rate (lbs/hr): 19.6 (worst case represented by K004)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 1755.0

MAGLC (ug/m³): 10,338.0

The permittee has demonstrated that emissions of xylene from emissions unit K004 and K005 are each calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

- (11) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the “Toxic Air Contaminant Statute” 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 a non-restrictive change to a parameter or process operation, where compliance with the “Toxic Air Contaminant Statute”, ORC



3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

(12) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.



- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the thermal incinerator was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;
 - ii. any records of downtime (date and length of time) for the capture (collection) system, the thermal incinerator, and/or the monitoring equipment when the emissions unit(s) was/were in operation;
 - iii. a log of the operating time for the capture system, thermal incinerator, monitoring equipment, and the emissions unit(s);
 - iv. all three-hour blocks of time, when the emissions unit was in operation, during which the permanent total enclosure was not maintained at the minimum pressure differential of 0.007 inches of water;
 - v. a log of each day when the calculated hourly average VOC emissions exceeded the hourly VOC emissions limitation of 19.6 lbs/hr for **K004**;
 - vi. a log of each day when the calculated hourly average VOC emissions exceeded the hourly VOC emissions limitation of 11.2 lbs/hr for **K005**;
 - vii. a log of each month when the calculated volume weighted average VOC emissions exceeded 1.01 lbs/gallon of coating solids applied for **K004**;
 - viii. a log of each month when the calculated volume weighted average VOC emissions exceeded 1.17 lbs/gallon of coating solids applied for **K005**; and
 - ix. each rolling, 12-month period during which the combined VOC emissions from emissions unit K004 and K005 exceeded 74.0 tons.
 - b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).



If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(4) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the thermal incinerator during the 12-month reporting period for this/these emissions unit(s):

- a. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal incinerator was outside of the acceptable range;
- b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal incinerator;
- c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;
- d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal incinerator into compliance with the acceptable range, was determined to be necessary and was not taken;
- e. each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit;
- f. a log of each day when a fuel other than natural gas was burned in the curing oven/thermal incinerator serving this emissions unit; and
- g. the permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:



a. Emissions limitations:

For **K004**, VOC emissions shall not exceed 19.6 lbs/hr from coatings and cleanup materials.

For **K005**, VOC emissions shall not exceed 11.2 lbs/hr from coatings and cleanup materials.

Applicable Compliance Method:

If required, compliance with the hourly VOC emissions limitations shall be determined through emissions tests performed in accordance with 40 CFR, Part 60, Appendix A, Method 18, Method 25, or Method 25A.

b. Emissions limitations:

For **K004**, VOC emissions shall not exceed 1.01 lbs/gallon of coating solids applied.

For **K005**, VOC emissions shall not exceed 1.17 lbs/gallon of coating solids applied.

Applicable Compliance Method:

Compliance with the VOC coating restrictions shall be demonstrated through the recordkeeping required in d)(1).

c. Emissions limitations:

Emissions from the combustion of natural gas in the curing oven/thermal incinerator serving emissions unit **K004** shall not exceed the following:

NO_x emissions shall not exceed 0.80 lb/hr and 3.50 TPY;
SO₂ emissions shall not exceed 0.005 lb/hr and 0.02 TPY;
PE shall not exceed 0.06 lb/hr and 0.26 TPY;
CO emissions shall not exceed 0.67 lb/hr and 2.93 TPY; and
VOC emissions shall not exceed 0.04 lb/hr and 0.18 TPY.

Emissions from the combustion of natural gas in the curing oven/thermal incinerator serving emissions unit **K005** shall not exceed the following:

NO_x emissions shall not exceed 0.40 lb/hr and 1.75 TPY;
SO₂ emissions shall not exceed 0.0024 lb/hr and 0.01 TPY;
PE shall not exceed 0.03 lb/hr and 0.13 TPY;
CO emissions shall not exceed 0.34 lb/hr and 1.49 TPY; and
VOC emissions shall not exceed 0.02 lb/hr and 0.09 TPY.

Applicable Compliance Method:

The hourly emissions limitations were established by multiplying the maximum heat input capacity for each curing oven/thermal incinerator (8.1964 MMBtu for



K004 and 4.0982 MMBtu for **K005**) by the following emissions factors from AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Tables 1.4-1 and 1.4-2, July 1998:

<u>Pollutant</u>	<u>Emissions Factor</u>
NO _x	0.09803 lb/MMBtu
SO ₂	0.00059 lb/MMBtu
PE	0.00745 lb/MMBtu
CO	0.08235 lb/MMBtu
VOC	0.00539 lb/MMBtu

The annual emissions limitations were established by multiplying the hourly emissions limitations by the maximum number of hours in a year (8,760) and converting to tons by dividing by 2,000.

d. Emissions limitation:

VOC emissions from K004 and K005 combined shall not exceed 74.0 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the combined, rolling, 12-month VOC emissions limitation shall be demonstrated through the recordkeeping required in d)(2).

e. Emissions limitation:

Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with 40 CFR, Part 60, Appendix A, Method 9.

(2) The permittee shall conduct, or have conducted, emission testing for emissions units K004 and K005 in accordance with the following requirements:

- a. The permittee conducted emission testing for emissions unit **K005** on May 21, 2014. Emission testing for emissions unit **K004** shall be conducted within 9 months after issuance of the permit.
- b. The emission testing shall be conducted to demonstrate compliance with the 95% VOC destruction removal efficiency requirement.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
 - i. 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 25 or Method 25A as appropriate.



Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The capture efficiency shall be determined using Methods 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 USEPA's "Guidelines for Determining Capture Efficiency" dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.)
- e. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.
- f. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- g. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. 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 District Office's or local air agency's refusal to accept the results of the emission test(s).
- h. Personnel from the appropriate Ohio EPA District Office or local air agency 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.
- i. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the



Final Permit-to-Install and Operate

Crown Cork and Seal

Permit Number: P0082486

Facility ID: 0123010255

Effective Date: 8/20/2014

submission of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

- (1) None.