



John R. Kasich, Governor
 Mary Taylor, Lt. Governor
 Scott J. Nally, Director

8/5/2013

Mr. James McIntosh
 EI Ceramics LLC
 2600 Commerce Blvd
 Sharonville, OH 45241

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1431404130
 Permit Number: P0114442
 Permit Type: Renewal
 County: Hamilton

Certified Mail

Yes	TOXIC REVIEW
No	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

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/dapc/permitsurvey.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 Southwest Ohio Air Quality Agency at (513)946-7777 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: SWOAQA



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
EI Ceramics LLC**

Facility ID:	1431404130
Permit Number:	P0114442
Permit Type:	Renewal
Issued:	8/5/2013
Effective:	8/5/2013
Expiration:	3/16/2014



**Division of Air Pollution Control
Permit-to-Install and Operate**

for
EI Ceramics LLC

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Final Permit-to-Install and Operate
EI Ceramics LLC
Permit Number: P0114442
Facility ID: 1431404130
Effective Date: 8/5/2013

Authorization

Facility ID: 1431404130
Application Number(s): A0046106
Permit Number: P0114442
Permit Description: FEPTIO Renewal permit for emissions units P001 (mixing process), P003 (kiln #1 with thermal oxidizer), P004 (kiln #2 with thermal oxidizer), and P005 (curing oven #2).
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 8/5/2013
Effective Date: 8/5/2013
Expiration Date: 3/16/2014
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

EI Ceramics LLC
2600 Commerce Blvd.
Sharonville, OH 45241

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

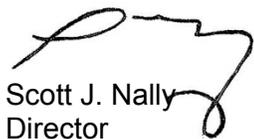
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Southwest Ohio Air Quality Agency
250 William Howard Taft Rd.
Cincinnati, OH 45219
(513)946-7777

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



Scott J. Nally
Director



Authorization (continued)

Permit Number: P0114442

Permit Description: FEPTIO Renewal permit for emissions units P001 (mixing process), P003 (kiln #1 with thermal oxidizer), P004 (kiln #2 with thermal oxidizer), and P005 (curing oven #2).

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

Emissions Unit ID:	P001
Company Equipment ID:	Mixing Process
Superseded Permit Number:	14-05345
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	P003
Company Equipment ID:	Kiln #1
Superseded Permit Number:	14-05345
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	P004
Company Equipment ID:	Kiln #2
Superseded Permit Number:	14-05702
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	P005
Company Equipment ID:	Curing Oven #2
Superseded Permit Number:	14-05702
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
EI Ceramics LLC
Permit Number: P0114442
Facility ID: 1431404130
Effective Date: 8/5/2013

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. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. 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 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 Southwest Ohio Air Quality Agency 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 submitting¹ 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 emissions 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.

¹Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).



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
El Ceramics LLC
Permit Number: P0114442
Facility ID: 1431404130
Effective Date: 8/5/2013

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., 3., 4., and 5.
2. The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P001 (Mixing Process, Rotary Dryer, Vibrating Screen, and Hammermill), P002 (Curing Oven No. 1 - Blending, Pressing, Glazing and Curing of Ceramic Shapes), P003 (Kiln No. 1 with Thermal Oxidizer), P004 (Batch Kiln No. 2 with Thermal Oxidizer), P005 (Curing Oven No. 2), any de minimis emissions units as defined in OAC rule 3745-15-05, any registration status and/or permit exempt emissions units, or future constructed emissions units, shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.
3. The permittee shall collect and record the following information each month for the emissions units identified in 2.:
 - a) the name and identification number of each HAP containing material employed;
 - b) the identification of each individual HAP contained in each material employed;
 - c) the HAP emission factor for each individual HAP and each type of operation;
 - d) the total individual HAP emissions for each HAP from all sources, in pounds or tons per month;
 - e) the total combined HAP emissions from all sources, in pounds or tons per month [the summation of the individual HAP emissions from d) above];
 - f) the updated rolling, 12-month summation of the individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
 - g) The updated rolling, 12-month summation of the combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting Southwest Ohio Air Quality Agency. This information does not have to be kept on an individual emissions unit basis.



4. The permittee shall submit quarterly deviation reports which identify any exceedance of the HAP emission limitations outlined in 2. If no exceedances occurred, the permittee shall state so in the report. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June, and July through September, respectively).

5. Emission Limitation:

HAP emissions shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for combined HAPs, based on a rolling, 12-month summation for the emissions units listed in 2.

Applicable Compliance Method:

Compliance with the HAP emission limitations in 2 shall be demonstrated by the record keeping requirements specified in 3.



Final Permit-to-Install and Operate
EI Ceramics LLC
Permit Number: P0114442
Facility ID: 1431404130
Effective Date: 8/5/2013

C. Emissions Unit Terms and Conditions



1. P001, Mixing Process

Operations, Property and/or Equipment Description:

Mixing Process, Rotary Dryer, Vibrating Screen, and Hammermill

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. None.

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

a. b)(1)b., b)(2)b., d)(6), e)(1), f)(1)c., and f)(1)d.

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>Particulate emissions (PE) shall not exceed 2.37 pounds per hour and 10.4 tons per year (TPY) from the skip hoist, mixing process, rotary dryer, belt conveyor, screen and crush, chute and drum.</p> <p>Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.67 pound per hour and 2.93 tons per year (TPY) from the skip hoist, mixing process, rotary dryer, belt conveyor, screen and crush, chute and drum.</p> <p>Organic compound (OC) emissions shall not exceed 2.37 pounds per hour from the rotary dryer and oxidizer.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Rotary dryer and Mixer area oxidizer emissions:</p> <p>Nitrogen oxides (NOx) emissions shall not exceed 0.1 pound per mmBtu of actual heat input and 3.88 tons per year (TPY).</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.084 pound per mmBtu of actual heat input and 3.26 tons per year (TPY).</p> <p>Sulfur dioxide (SO2) emissions shall not exceed 0.0006 pound per mmBtu of actual heat input and 0.02 ton per year (TPY).</p> <p>Particulate emissions (PE) and particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.0076 pound per mmBtu of actual heat input and 0.29 ton per year (TPY).</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-17-07(B)(1), OAC rule 3745-17-08(B), and OAC rule 3745-31-05(D).</p>
b.	<p>OAC rule 3745-31-05(D)</p> <p><i>Synthetic Minor to Avoid Title V Applicability</i></p>	<p>Organic compound (OC) emissions shall not exceed 0.86 ton per month and 10.37 tons per year (TPY) from the rotary dryer.</p> <p>See b)(2)b. and Sections B.2., B.3., B.4. and B.5.</p>
c.	<p>OAC rule 3745-17-07(A)(1)</p>	<p>Visible particulate emissions from the stacks serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.</p>
d.	<p>OAC rule 3745-17-07(B)(1)</p>	<p>Visible emissions of fugitive dust shall not exceed twenty percent opacity as a three-minute average.</p>
e.	<p>OAC rule 3745-17-08(B)</p>	<p>The permittee shall minimize or eliminate visible particulate emissions from the batch weighing area.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
g.	OAC rule 3745-21-07(M)(4)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limits, the use of a fabric filter to control the mixing and batching area, and a thermal oxidizer to control the mixing area (rotary dryer).
- b. This emissions unit shall be equipped with a control device for OC emissions that is at least 95% efficient for OC emissions entering the control device.
- c. All of the OC emissions from this emissions unit shall be vented to a thermal oxidizer that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.
- d. The hourly emission limitations outlined in b)(1)a. are based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with these limits.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit controlled by the thermal oxidizer is in operation, shall not be less than 1450 degrees Fahrenheit or more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance.
- (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit is 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 manufacturers 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 is in operation:

- a. all 3-hour blocks of time, when the emissions unit controlled by the thermal oxidizer was in operation, during which the average combustion temperature within the thermal oxidizer was less than 1450 degrees Fahrenheit or more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance; and
- b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.

These records shall be maintained at the facility for a period of three years.

- (3) Whenever the monitored average combustion temperature within the thermal oxidizer 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.

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.

- (4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the screening baghouse is between 1 to 8 inches of water.
- (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a weekly basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range 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 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 pressure drop 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.

This range or limit on the pressure drop across the baghouse 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 limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or 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.

- (6) The permittee shall collect and record the following information each month for this emissions unit:
 - a. the emissions unit's production rate in tons/month; and
 - b. the total OC emission rate, in tons per month [a. x (73.41 lbs of OC/ton of production*) x (1-0.95) (or the control efficiency established during the most recent performance test) plus the emissions from the natural gas usage in the rotary dryer and oxidizer].
 - * the emissions factor is based on information submitted by the permittee.
- (7) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;



- d. the total duration of any visible emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) 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. OC emission limitations outlined in b)(1)b.;
 - ii. HAP emission limitation outlined in Section B.2.;
 - iii. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range; and
 - iv. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer.
- 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, 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 (the appropriate District Office or local air agency).



- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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 identify in the annual permit evaluation report the following information concerning the operations of the thermal oxidizer during the 12-month reporting period for this emissions unit:
 - a. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer 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 oxidizer;
 - 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 oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - 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.
- (4) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this emissions unit:
 - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
 - b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;
 - c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in "a" 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.



- (5) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(7) above:
 - a. all days during which any visible particulate emissions were observed from the stack(s) serving this emissions unit;
 - b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
 - c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack(s) and/or visible emissions of fugitive dust.
 - (6) 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.
- 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. Emission Limitation:

Visible particulate emissions from the stacks serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.
 - b. Emission Limitation:

Visible emissions of fugitive dust shall not exceed twenty percent opacity as a three-minute average.

Applicable Compliance Method:

Compliance with the limitation for visible emissions of fugitive dust shall be determined through visible emissions observations performed in accordance U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).



c. Emission Limitations:

Organic compound (OC) emissions shall not exceed 2.37 pounds per hour from the rotary dryer and oxidizer.

This emissions unit shall be equipped with a control device for OC emissions that is at least 95% efficient for OC emissions entering the control device.

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted approximately 3 years after issuance of FEPTIO P0114442.
- ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for OC, in the appropriate averaging period(s) and the control efficiency limitation for OC.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Method 25, 40 CFR Part 60, Appendix A.

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

- iv. 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.
- v. 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).



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

d. Emission Limitation:

Organic compound (OC) emissions shall not exceed 0.86 ton per month and 10.37 tons per year (TPY) from the rotary dryer.

Applicable Compliance Method:

The OC emissions are calculated with the following equation from the permittee-supplied information in the application:

$$OC = [(actual\ production\ rate\ in\ tons\ per\ month\ or\ tons\ per\ year) \times (73.41\ lbs\ of\ OC\ emissions\ per\ ton\ of\ production\ emissions\ factor) \times (1 - the\ control\ efficiency\ of\ the\ thermal\ oxidizer) / (2000\ lbs/ton)] + [(actual\ natural\ gas\ usage\ in\ mm\ cu\ ft\ from\ the\ dryer\ and\ oxidizer) \times (11\ lbs\ OC/mm\ cu\ ft\ emissions\ factor; AP-42\ Table\ 1.4-2,\ dtd.\ 7/98) / (2000\ lbs/ton)].$$

Compliance with the OC emission limitations shall be determined by the record keeping requirements specified in d)(6).

e. Emission Limitation:

Particulate emissions (PE) shall not exceed 2.37 pounds per hour and 10.4 tons per year (TPY) from the skip hoist, mixing process, rotary dryer, belt conveyor, screen and crush, chute and drum.

Applicable Compliance Method:

The hourly and annual potential PE rates for emissions unit P001 were determined based on the following equations from the permittee-supplied information in the application:

$$PE = [(0.6\ ton\ per\ hour\ max\ production\ rate) \times (1.2\ lbs\ PE\ per\ ton\ of\ production\ emissions\ factor\ for\ skip\ hoist,\ belt\ conveyor,\ chute,\ and\ drum) \times (1 - 99\% \ control\ efficiency\ for\ skip\ hoist,\ belt\ conveyor,\ chute,\ and\ drum)] + [(0.6\ ton\ per\ hour\ max\ production\ rate) \times (0.6\ lb\ PE\ per\ ton\ of\ production\ emissions\ factor\ for\ mixing\ process)] + [(0.6\ ton\ per\ hour\ max\ production\ rate) \times (65.0\ lbs\ PE\ per\ ton$$



of production emissions factor for rotary dryer) x (1 – 95% control efficiency for rotary dryer)] + [(0.6 ton per hour max production rate) x (8.5 lbs PE per ton of production emissions factor for screen and crush) x (1 – 99% control efficiency for screen and crush)] = 2.37 pounds per hour.

$$PE = (2.37 \text{ pounds per hour potential hourly emissions}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton}) = 10.4 \text{ TPY.}$$

f. Emission Limitation:

Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.67 pound per hour and 2.93 tons per year (TPY) from the skip hoist, mixing process, rotary dryer, belt conveyor, screen and crush, chute and drum.

Applicable Compliance Method:

The hourly and annual potential PM10 emission rates for emissions unit P001 were determined based on the following equations from the permittee-supplied information in the application:

$$PM10 = [(0.6 \text{ ton per hour max production rate}) \times (0.6 \text{ lb PM10 per ton of production emissions factor for skip hoist, belt conveyor, chute, and drum}) \times (1 - 99\% \text{ control efficiency for skip hoist, belt conveyor, chute, and drum})] + [(0.6 \text{ ton per hour max production rate}) \times (0.3 \text{ lb PM10 per ton of production emissions factor for mixing process})] + [(0.6 \text{ ton per hour max production rate}) \times (16.0 \text{ lbs PM10 per ton of production emissions factor for rotary dryer}) \times (1 - 95\% \text{ control efficiency for rotary dryer})] + [(0.6 \text{ ton per hour max production rate}) \times (0.53 \text{ lb PM10 per ton of production emissions factor for screen and crush}) \times (1 - 99\% \text{ control efficiency for screen and crush})] = 0.67 \text{ pound per hour.}$$

$$PM10 = (0.67 \text{ pound per hour potential hourly emissions}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton}) = 2.93 \text{ TPY.}$$

g. Emission Limitation:

Rotary dryer and Mixer area oxidizer emissions:

Particulate emissions (PE) and particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.0076 pound per mmBtu of actual heat input and 0.29 ton per year (TPY).

Applicable Compliance Method:

The pound per mmBtu and annual uncontrolled potential PE/PM10 emission rates from the rotary dryer and mixer area oxidizer for emissions unit P001 were determined based on the following equations from the permittee-supplied information in the application:

$$PE/PM10 = (7.6 \text{ lbs PE/mm cu ft natural gas emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) / (1000 \text{ mmBtu/mm cu ft of natural gas}) = 0.0076 \text{ pound per mmBtu.}$$



$PE/PM_{10} = (0.00886 \text{ mm cu ft / hr max natural gas usage}) \times (7.6 \text{ lbs PE/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton}) = 0.29 \text{ TPY.}$

h. Emission Limitation:

Rotary dryer and Mixer area oxidizer emissions:

Nitrogen oxides (NO_x) emissions shall not exceed 0.1 pound per mmBtu of actual heat input and 3.88 tons per year (TPY).

Applicable Compliance Method:

The pound per mmBtu and annual uncontrolled potential NO_x emission rates for emissions unit P001 were determined based on the following equations from the permittee-supplied information in the application:

$NO_x = (100 \text{ lbsNO}_x/\text{mm cu ft natural gas emissions factor; AP-42 Table 1.4-1, dtd. 7/98}) / (1000 \text{ mmBtu/mm cu ft of natural gas}) = 0.1 \text{ pound per mmBtu.}$

$NO_x = (0.00886 \text{ mm cu ft / hr max natural gas usage}) \times (100 \text{ lbsNO}_x/\text{mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton}) = 3.88 \text{ TPY.}$

i. Emission Limitation:

Rotary dryer and Mixer area oxidizer emissions:

Sulfur dioxide (SO₂) emissions shall not exceed 0.0006 pound per mmBtu of actual heat input and 0.02 ton per year (TPY).

Applicable Compliance Method:

The pound per mmBtu and annual uncontrolled potential SO₂ emission rates for emissions unit P001 were determined based on the following equations from the permittee-supplied information in the application:

$SO_2 = (0.6 \text{ lb SO}_2/\text{mm cu ft natural gas emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) / (1000 \text{ mmBtu/mm cu ft of natural gas}) = 0.0006 \text{ pound per mmBtu.}$

$SO_2 = (0.00886 \text{ mm cu ft / hr max natural gas usage}) \times (0.6 \text{ lb SO}_2/\text{mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton}) = 0.02 \text{ TPY.}$

j. Emission Limitation:

Rotary dryer and Mixer area oxidizer emissions:

Carbon monoxide (CO) emissions shall not exceed 0.084 pound per mmBtu of actual heat input and 3.26 tons per year (TPY).



Applicable Compliance Method:

The pound per mmBtu and annual uncontrolled potential CO emission rates for emissions unit P001 were determined based on the following equations from the permittee-supplied information in the application:

$$\text{CO} = (84 \text{ lbs CO/mm cu ft natural gas emissions factor; AP-42 Table 1.4-1, dtd. 7/98}) / (1000 \text{ mmBtu/mm cu ft of natural gas}) = 0.084 \text{ pound per mmBtu.}$$

$$\text{CO} = (0.00886 \text{ mm cu ft / hr max natural gas usage}) \times (84 \text{ lbs CO/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton}) = 3.26 \text{ TPY.}$$

g) Miscellaneous Requirements

- (1) None.



2. P003, Kiln #1

Operations, Property and/or Equipment Description:

Kiln No. 1 with Thermal Oxidizer

- 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)(6) and d)(7).
 - (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)b., d)(4), e)(1), f)(1)b., and f)(1)c.
- 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)	Kiln and kiln oxidizer emissions: Organic compound (OC) emissions shall not exceed 3.93 pounds per hour. Particulate emissions (PE) shall not exceed 0.20 pound per hour and 0.84 ton per year (TPY). Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.15 pound per hour and 0.64 ton per year (TPY). Nitrogen oxides (NOx) emissions shall not exceed 0.28 pound per hour and 1.23 tons per year (TPY).



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Sulfur dioxide (SO₂) emissions shall not exceed 0.34 pound per hour and 1.5 tons per year (TPY).</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.68 pound per hour and 3.0 tons per year (TPY).</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D).</p>
b.	<p>OAC rule 3745-31-05(D)</p> <p><i>Synthetic Minor to Avoid Title V Applicability</i></p>	<p>Organic compound emissions shall not exceed 1.44 tons per month and 17.3 tons per year (TPY) from the kiln and kiln oxidizer.</p> <p>See b)(2)b. and Sections B.2., B.3., B.4., and B.5.</p>
c.	<p>OAC rule 3745-17-07(A)(1)</p>	<p>Visible particulate emissions from the stacks serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.</p>
d.	<p>OAC rule 3745-17-11</p>	<p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>
e.	<p>OAC rule 3745-21-07(M)(4)</p>	<p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>

(2) Additional Terms and Conditions

- a. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the Air Toxics Policy, emissions limits, and the use of a 95% efficient thermal oxidizer on the kiln.
- b. This emissions unit shall be equipped with a control device for OC emissions that is at least 95% efficient for OC emissions entering the control device.
- c. All of the OC emissions from this emissions unit shall be vented to a thermal oxidizer that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.



- d. The hourly emission limitations outlined in b)(1)a. are based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with these limits.
- c) Operational Restrictions
 - (1) None.
 - d) Monitoring and/or Recordkeeping Requirements
 - (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit controlled by the thermal oxidizer is 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 was in compliance.
 - (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit is 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 is in operation:
 - a. all 3-hour blocks of time, when the emissions unit controlled by the thermal oxidizer was in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.
 - (3) Whenever the monitored average combustion temperature within the thermal oxidizer 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.

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.

- (4) The permittee shall collect and record the following information each month for this emissions unit:
 - a. the emissions unit's production rate in tons/month; and
 - b. the total OC emission rate, in tons per month [a. x (156.5 lbs of OC/ton of production*) x (1-0.95) (or the control efficiency established during the most recent performance test) plus the emissions from the natural gas usage in the oxidizer].

* the emissions factor is based on information submitted by the permittee.



- (5) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (6) The permit to install and operate for this emissions unit (P003) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install and operate application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install and operate 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: phenol

TLV (mg/m³): 19.25

Maximum Hourly Emission Rate (lb/hr): 0.196

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 13.3

MAGLC (ug/m³): 458.33



Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air 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 still 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 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.).
- (7) 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 and operate will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. 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 and operate 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.



e) Reporting Requirements

(1) 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. OC emission limitations outlined in b)(1)b.;
 - ii. HAP emission limitation outlined in Section B.2.;
 - iii. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range; and
 - iv. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer.
- 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, 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 (the appropriate District Office or local air agency).

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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 identify in the annual permit evaluation report the following information concerning the operations of the thermal oxidizer during the 12-month reporting period for this emissions unit:

- a. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range;



- b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer;
 - 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 into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - 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.
- (4) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(5) above:
- a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and
 - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.
- (5) 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.
- 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. Emission Limitation:

Visible particulate emissions from the stacks shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.



b. Emission Limitations:

Organic compound (OC) emissions shall not exceed 3.93 pounds per hour.

This emissions unit shall be equipped with a control device for OC emissions that is at least 95% efficient for OC emissions entering the control device.

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted approximately 4.5 years after issuance of FEPTIO P0114442.
- ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for OC, in the appropriate averaging period(s) and the control efficiency limitation for OC.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Method 25, 40 CFR Part 60, Appendix A.

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

- iv. 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.
- v. 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).



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

c. Emission Limitation:

Organic compound emissions shall not exceed 1.44 tons per month and 17.3 tons per year (TPY) from the kiln and kiln oxidizer.

Applicable Compliance Method:

The OC emissions are calculated with the following equation from the permittee-supplied information in the application:

$$OC = [(actual\ production\ rate\ in\ tons\ per\ month\ or\ tons\ per\ year) \times (156.5\ lbs\ of\ OC\ emissions\ per\ ton\ of\ production\ emissions\ factor) \times (1 - the\ control\ efficiency\ of\ the\ thermal\ oxidizer) / (2000\ lbs/ton)] + [(actual\ natural\ gas\ usage\ in\ mm\ cu\ ft) \times (11\ lbs\ OC/mm\ cu\ ft\ emissions\ factor; AP-42\ Table\ 1.4-2, dtd. 7/98) / (2000\ lbs/ton)].$$

Compliance with the OC emission limitations shall be determined by the record keeping requirements specified in d)(4).

d. Emission Limitation:

Particulate emissions (PE) shall not exceed 0.20 pound per hour and 0.84 ton per year (TPY).

Applicable Compliance Method:

The hourly and annual uncontrolled potential PE rates for emissions unit P003 were determined based on the following equations from the permittee-supplied information in the application:

$$PE = [(0.5\ ton\ per\ hour\ max\ production\ rate\ for\ the\ kiln) \times (0.37\ lb\ PE\ per\ ton\ of\ production\ emissions\ factor)] + [(0.001\ mm\ cu\ ft / hr\ max\ natural\ gas\ usage) \times (7.6\ lbs\ PE/mm\ cu\ ft\ emissions\ factor; AP-42\ Table\ 1.4-2, dtd. 7/98)] = 0.20\ pound\ per\ hour.$$



$PE = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (0.37 \text{ lb PE per ton of production emissions factor}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (7.6 \text{ lbs PE/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] = 0.84 \text{ TPY}.$

e. Emission Limitation:

Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.15 pound per hour and 0.64 ton per year (TPY).

Applicable Compliance Method:

The hourly and annual uncontrolled potential PM10 emission rates for emissions unit P003 were determined based on the following equations from the permittee-supplied information in the application:

$PM10 = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (0.28 \text{ lb PM10 emissions per ton of production emissions factor})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (7.6 \text{ lbs PE/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98})] = 0.15 \text{ pound per hour}.$

$PM10 = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (0.28 \text{ lb PM10 emissions per ton of production emissions factor}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (7.6 \text{ lbs PE/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] = 0.64 \text{ TPY}.$

f. Emission Limitation:

Nitrogen oxides (NOx) emissions shall not exceed 0.28 pound per hour and 1.23 tons per year (TPY).

Applicable Compliance Method:

The hourly and annual uncontrolled potential NOx emission rates for emissions unit P003 were determined based on the following equations from the permittee-supplied information in the application:

$NOx = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (0.35 \text{ lbNOx emissions per ton of production emissions factor})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (100 \text{ lbsNOx/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98})] = 0.28 \text{ pound per hour}.$

$NOx = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (0.35 \text{ lbNOx emissions per ton of production emissions factor}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (100 \text{ lbsNOx/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] = 1.23 \text{ TPY}.$



g. Emission Limitation:

Sulfur dioxide (SO₂) emissions shall not exceed 0.34 pound per hour and 1.5 tons per year (TPY).

Applicable Compliance Method:

The hourly and annual uncontrolled potential SO₂ emission rates for emissions unit P003 were determined based on the following equations from the permittee-supplied information in the application:

$SO_2 = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (0.67 \text{ lb } SO_2 \text{ emissions per ton of production emissions factor})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (0.6 \text{ lb } SO_2/\text{mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98})] = 0.34 \text{ pound per hour.}$

$SO_2 = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (0.67 \text{ lb } SO_2 \text{ emissions per ton of production emissions factor}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (0.6 \text{ lb } SO_2/\text{mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] = 1.5 \text{ TPY.}$

h. Emission Limitation:

Carbon monoxide (CO) emissions shall not exceed 0.68 pound per hour and 3.0 tons per year (TPY).

Applicable Compliance Method:

The hourly and annual uncontrolled potential CO emission rates for emissions unit P003 were determined based on the following equations from the permittee-supplied information in the application:

$CO = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (1.2 \text{ lbs CO emissions per ton of production emissions factor})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (84 \text{ lbs CO/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98})] = 0.68 \text{ pound per hour.}$

$CO = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (1.2 \text{ lbs CO emissions per ton of production emissions factor}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (84 \text{ lbs CO/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] = 3.0 \text{ TPY.}$

g) Miscellaneous Requirements

- (1) None.



3. P004, Kiln #2

Operations, Property and/or Equipment Description:

Batch Kiln No. 2 with Thermal Oxidizer

- 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)(6) and d)(7).
 - (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)b., d)(4), e)(1), f)(1)b., and f)(1)c.
- 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>The kiln and kiln oxidizer emissions shall not exceed the following:</p> <p>Organic compound (OC) emissions shall not exceed 3.93 pound per hour.</p> <p>Particulate emissions (PE) shall not exceed 0.20 pound per hour and 0.84 ton per year (TPY).</p> <p>Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.15 pound per hour and 0.64 ton per year (TPY).</p> <p>Nitrogen oxides (NOx) emissions shall not exceed 0.28 pound per hour and 1.23 tons per year (TPY).</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Sulfur dioxide (SO₂) emissions shall not exceed 0.34 pound per hour and 1.5 tons per year (TPY).</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.68 pound per hour and 3.0 tons per year (TPY).</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D).</p>
b.	<p>OAC rule 3745-31-05(D)</p> <p><i>Synthetic Minor to Avoid Title V Applicability</i></p>	<p>The kiln and kiln oxidizer emissions shall not exceed the following:</p> <p>Organic compound (OC) emissions shall not exceed 1.44 tons per month and 17.3 tons per year (TPY).</p> <p>See b)(2)b. and Sections B.2., B.3., B.4., and B.5.</p>
c.	<p>OAC rule 3745-17-07(A)(1)</p>	<p>Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.</p>
d.	<p>OAC rule 3745-17-11</p>	<p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>
e.	<p>OAC rule 3745-21-07(M)(4)</p>	<p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>

(2) Additional Terms and Conditions

- a. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limits and the use of a 95% efficient thermal oxidizer on the kiln.
- b. This emissions unit shall be equipped with a control device for OC emissions that is at least 95% efficient for OC emissions entering the control device.
- c. All of the OC emissions from this emissions unit shall be vented to a thermal oxidizer that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.



- d. The hourly emission limitations outlined in b)(1)a. are based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with these limits.
- c) Operational Restrictions
 - (1) None.
 - d) Monitoring and/or Recordkeeping Requirements
 - (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit controlled by the thermal oxidizer is 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 was in compliance.
 - (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit is 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 is in operation:
 - a. all 3-hour blocks of time, when the emissions unit controlled by the thermal oxidizer was in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance; and
 - b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.
 - (3) Whenever the monitored average combustion temperature within the thermal oxidizer 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.

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.

- (4) The permittee shall collect and record the following information each month for this emissions unit:
 - a. the emissions unit's production rate in tons/month; and
 - b. the total OC emission rate, in tons per month [a. x (156.5 lbs of OC/ton of production*) x (1-0.95) (or the control efficiency established during the most recent performance test) plus the emissions from the natural gas usage in the oxidizer].

* the emissions factor is based on information submitted by the permittee.
- (5) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack



servicing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (6) The permit to install and operate for this emissions unit (P004) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install and operate application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install and operate 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: phenol

TLV (mg/m³): 19.25

Maximum Hourly Emission Rate (lb/hr): 0.196

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 154.2

MAGLC (ug/m³): 458.33

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air 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 still 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 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.).
- (7) 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 and operate will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. 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 and operate 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.
- e) Reporting Requirements
- (1) 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. OC emission limitations outlined in b)(1)b.;
 - ii. HAP emission limitation outlined in Section B.2.;
 - iii. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range; and
 - iv. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer.
- 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, 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 (the appropriate District Office or local air agency).

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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 identify in the annual permit evaluation report the following information concerning the operations of the thermal oxidizer during the 12-month reporting period for this emissions unit:
 - a. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range;
 - b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer;
 - 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 into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - 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.
- (4) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(5) above:
- a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and
 - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.
- (5) 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.
- 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. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.
 - b. Emission Limitations:

Organic compound (OC) emissions shall not exceed 3.93 pounds per hour.

This emissions unit shall be equipped with a control device for OC emissions that is at least 95% efficient for OC emissions entering the control device.

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:



- i. The emission testing shall be conducted within 6 months after issuance of FEPTIO P0114442.
- ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for OC, in the appropriate averaging period(s) and the control efficiency limitation for OC.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Method 25, 40 CFR Part 60, Appendix A.

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

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



c. Emission Limitation:

The kiln and kiln oxidizer emissions shall not exceed the following:

Organic compound (OC) emissions shall not exceed 1.44 tons per month and 17.3 tons per year (TPY).

Applicable Compliance Method:

The OC emissions are calculated with the following equation from the permittee-supplied information in the application:

$$OC = [(actual\ production\ rate\ in\ tons\ per\ month\ or\ tons\ per\ year) \times (156.5\ lbs\ of\ OC\ emissions\ per\ ton\ of\ production\ emissions\ factor) \times (1 - the\ control\ efficiency\ of\ the\ thermal\ oxidizer) / (2000\ lbs/ton)] + [(actual\ natural\ gas\ usage\ in\ mm\ cu\ ft) \times (11\ lbs\ OC/mm\ cu\ ft\ emissions\ factor; AP-42\ Table\ 1.4-2,\ dtd.\ 7/98) / (2000\ lbs/ton)].$$

Compliance with the OC emission limitations shall be determined by the record keeping requirements specified in d)(4).

d. Emission Limitation:

Particulate emissions (PE) shall not exceed 0.20 pound per hour and 0.84 ton per year (TPY).

Applicable Compliance Method:

The hourly and annual uncontrolled potential PE rates for emissions unit P004 were determined based on the following equations from the permittee-supplied information in the application:

$$PE = [(0.5\ ton\ per\ hour\ max\ production\ rate\ for\ the\ kiln) \times (0.37\ lb\ PE\ per\ ton\ of\ production\ emissions\ factor)] + [(0.001\ mm\ cu\ ft / hr\ max\ natural\ gas\ usage) \times (7.6\ lbs\ PE/mm\ cu\ ft\ emissions\ factor; AP-42\ Table\ 1.4-2,\ dtd.\ 7/98)] = 0.20\ pound\ per\ hour.$$

$$PE = [(0.5\ ton\ per\ hour\ max\ production\ rate\ for\ the\ kiln) \times (0.37\ lb\ PE\ per\ ton\ of\ production\ emissions\ factor) \times (8760\ hrs/yr) / (2000\ lbs/ton)] + [(0.001\ mm\ cu\ ft / hr\ max\ natural\ gas\ usage) \times (7.6\ lbs\ PE/mm\ cu\ ft\ emissions\ factor; AP-42\ Table\ 1.4-2,\ dtd.\ 7/98) \times (8760\ hrs/yr) / (2000\ lbs/ton)] = 0.84\ TPY.$$

e. Emission Limitation:

Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.15 pound per hour and 0.64 ton per year (TPY).



Applicable Compliance Method:

The hourly and annual uncontrolled potential PM10 emission rates for emissions unit P004 were determined based on the following equations from the permittee-supplied information in the application:

$$\text{PM10} = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (0.28 \text{ lb PM10 emissions per ton of production emissions factor})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (7.6 \text{ lbs PE/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98})] = 0.15 \text{ pound per hour.}$$

$$\text{PM10} = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (0.28 \text{ lb PM10 emissions per ton of production emissions factor}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (7.6 \text{ lbs PE/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] = 0.64 \text{ TPY.}$$

f. Emission Limitation:

Nitrogen oxides (NOx) emissions shall not exceed 0.28 pound per hour and 1.23 tons per year (TPY).

Applicable Compliance Method:

The hourly and annual uncontrolled potential NOx emission rates for emissions unit P004 were determined based on the following equations from the permittee-supplied information in the application:

$$\text{NOx} = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (0.35 \text{ lbNOx emissions per ton of production emissions factor})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (100 \text{ lbsNOx/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98})] = 0.28 \text{ pound per hour.}$$

$$\text{NOx} = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (0.35 \text{ lbNOx emissions per ton of production emissions factor}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] + [(0.001 \text{ mm cu ft / hr max natural gas usage}) \times (100 \text{ lbsNOx/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] = 1.23 \text{ TPY.}$$

g. Emission Limitation:

Sulfur dioxide (SO2) emissions shall not exceed 0.34 pound per hour and 1.5 tons per year (TPY).

Applicable Compliance Method:

The hourly and annual uncontrolled potential SO2 emission rates for emissions unit P004 were determined based on the following equations from the permittee-supplied information in the application:

$$\text{SO2} = [(0.5 \text{ ton per hour max production rate for the kiln}) \times (0.67 \text{ lb SO2 emissions per ton of production emissions factor})] + [(0.001 \text{ mm cu ft / hr max}$$



natural gas usage) x (0.6 lb SO₂/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98)] = 0.34 pound per hour.

SO₂ = [(0.5 ton per hour max production rate for the kiln) x (0.67 lb SO₂ emissions per ton of production emissions factor) x (8760 hrs/yr) / (2000 lbs/ton)] + [(0.001 mm cu ft / hr max natural gas usage) x (0.6 lb SO₂/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98) x (8760 hrs/yr) / (2000 lbs/ton)] = 1.5 TPY.

h. Emission Limitation:

Carbon monoxide (CO) emissions shall not exceed 0.68 pound per hour and 3.0 tons per year (TPY).

Applicable Compliance Method:

The hourly and annual uncontrolled potential CO emission rates for emissions unit P004 were determined based on the following equations from the permittee-supplied information in the application:

CO = [(0.5 ton per hour max production rate for the kiln) x (1.2 lbs CO emissions per ton of production emissions factor)] + [(0.001 mm cu ft / hr max natural gas usage) x (84 lbs CO/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98)] = 0.68 pound per hour.

CO = [(0.5 ton per hour max production rate for the kiln) x (1.2 lbs CO emissions per ton of production emissions factor) x (8760 hrs/yr) / (2000 lbs/ton)] + [(0.001 mm cu ft / hr max natural gas usage) x (84 lbs CO/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98) x (8760 hrs/yr) / (2000 lbs/ton)] = 3.0 TPY.

g) Miscellaneous Requirements

- (1) None.



4. P005, Curing Oven #2

Operations, Property and/or Equipment Description:

Curing Oven No. 2

- 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)(6) and d)(7).
 - (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)b., d)(4), e)(1), f)(1)b., and f)(1)c.
- 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)	The curing oven and curing oven oxidizer emissions shall not exceed the following: Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.86 ton per year (TPY). Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.12 pound per hour and 0.53 ton per year (TPY). Organic compound (OC) emissions shall not exceed 2.52 pounds per hour. Nitrogen oxides (NOx) emissions shall not exceed 1.01 pounds per hour and 4.42 tons per year (TPY).



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Carbon monoxide (CO) emissions shall not exceed 0.084 pound per mmBtu of actual heat input and 3.3 tons per year (TPY).</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.0006 pound per mmBtu of actual heat input and 0.02 ton per year (TPY).</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-31-05(D).</p>
b.	<p>OAC rule 3745-31-05(D)</p> <p><i>Synthetic Minor to Avoid Title V Applicability</i></p>	<p>The curing oven and curing oven oxidizer emissions shall not exceed the following:</p> <p>Organic compound (OC) emissions shall not exceed 0.92 ton per month and 11.0 tons per year (TPY).</p> <p>See b)(2)b. and Sections B.2., B.3., B.4., and B.5.</p>
c.	<p>OAC rule 3745-17-07(A)(1)</p>	<p>Visible particulate emissions from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.</p>
d.	<p>OAC rule 3745-17-11</p>	<p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>
e.	<p>OAC rule 3745-21-07(M)(4)</p>	<p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>

(2) Additional Terms and Conditions

- a. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limits and the use of a 95% efficient thermal oxidizer on the curing oven.
- b. This emissions unit shall be equipped with a control device for OC emissions that is at least 95% efficient for OC emissions entering the control device.



- c. All of the OC emissions from this emissions unit shall be vented to a thermal oxidizer that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.
- d. The short term emission limitations outlined in b)(1)a. are based upon the emissions unit's potential to emit. Therefore, no short term records are required to demonstrate compliance with these limits.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit controlled by the thermal oxidizer is in operation, shall not be less than 1450 degrees Fahrenheit or more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance.

- (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit is 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 manufacturers 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 is in operation:

- a. all 3-hour blocks of time, when the emissions unit controlled by the thermal oxidizer was in operation, during which the average combustion temperature within the thermal oxidizer was less than 1450 degrees Fahrenheit or more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit was in compliance; and
- b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.

These records shall be maintained at the facility for a period of three years.

- (3) Whenever the monitored average combustion temperature within the thermal oxidizer 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.

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.

- (4) The permittee shall collect and record the following information each month for this emissions unit:
 - a. the emissions unit's production rate in tons/month; and
 - b. the total OC emission rate, in tons per month [a. x 65.27 lbs of OC/ton of production* x (1-0.95) (or the control efficiency established during the most



recent performance test) plus the emissions from the natural gas usage in the oxidizer].

* the emissions factor is based on information submitted by the permittee.

- (5) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emissions incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (6) The permit to install and operate for this emissions unit (P005) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install and operate application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install and operate 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: phenol

TLV (mg/m³): 19.25

Maximum Hourly Emission Rate (lb/hr): 0.33



Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 99.99

MAGLC (ug/m3): 458.33

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air 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 still 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 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.).
- (7) 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 and operate will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. 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 and operate 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.



e) Reporting Requirements

(1) 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. OC emission limitations outlined in b)(1)b.;
 - ii. HAP emission limitation outlined in Section B.2.;
 - iii. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range; and
 - iv. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer.
- 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, 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 (the appropriate District Office or local air agency).

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA e-Business Center: Air Services 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 identify in the annual permit evaluation report the following information concerning the operations of the thermal oxidizer during the 12-month reporting period for this emissions unit:

- a. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the acceptable range;



- b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer;
 - 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 into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - 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.
- (4) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(5) above:
- a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and
 - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.
- (5) 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.
- 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. Emission Limitation:

Visible particulate emissions from the stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.



b. Emission Limitations:

Organic compound (OC) emissions shall not exceed 2.52 pounds per hour.

This emissions unit shall be equipped with a control device for OC emissions that is at least 95% efficient for OC emissions entering the control device.

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted approximately 2 years after issuance of FEPTIO P0114442.
- ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for OC, in the appropriate averaging period(s) and the control efficiency limitation for OC.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Method 25, 40 CFR Part 60, Appendix A.

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

- iv. 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.
- v. 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).



vi. 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.

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

c. Emission Limitation:

The curing oven and curing oven oxidizer emissions shall not exceed the following:

Organic compound (OC) emissions shall not exceed 0.92 ton per month and 11.0 tons per year (TPY).

Applicable Compliance Method:

The OC emissions are calculated with the following equation from the permittee-supplied information in the application:

$$OC = [(\text{actual production rate in tons per month or tons per year}) \times (65.27 \text{ lbs of OC emissions per ton of production emissions factor}) \times (1 - \text{the control efficiency of the thermal oxidizer}) / (2000 \text{ lbs/ton})] + [(\text{actual natural gas usage in mm cu ft}) \times (11 \text{ lbs OC/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) / (2000 \text{ lbs/ton})].$$

Compliance with the OC emission limitations shall be determined by the record keeping requirements specified in d)(4).

d. Emission Limitation:

Particulate emissions (PE) shall not exceed 0.2 pound per hour and 0.86 ton per year (TPY).

Applicable Compliance Method:

The hourly and annual uncontrolled potential PE rates for emissions unit P005 were determined based on the following equations from the permittee-supplied information in the application:



$PE = [(0.75 \text{ ton per hour max production rate for the curing oven}) \times (0.20 \text{ lb PE per ton of production emissions factor})] + [(0.0061 \text{ mm cu ft / hr max natural gas usage for the oxidizer}) \times (7.6 \text{ lbs PE/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98})] = 0.2 \text{ pound per hour.}$

$PE = [(0.75 \text{ ton per hour max production rate for the curing oven}) \times (0.20 \text{ lb PE per ton of production emissions factor}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] + [(0.0061 \text{ mm cu ft / hr max natural gas usage for the oxidizer}) \times (7.6 \text{ lbs PE/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] = 0.86 \text{ TPY.}$

e. Emission Limitation:

Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.12 pound per hour and 0.53 ton per year (TPY).

Applicable Compliance Method:

The hourly and annual uncontrolled potential PM10 emission rates for emissions unit P005 were determined based on the following equations from the permittee-supplied information in the application:

$PM10 = [(0.75 \text{ ton per hour max production rate for the curing oven}) \times (0.10 \text{ lb PM10 emissions per ton of production emissions factor})] + [(0.0061 \text{ mm cu ft / hr max natural gas usage for the oxidizer}) \times (7.6 \text{ lbs PE/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98})] = 0.12 \text{ pound per hour.}$

$PM10 = [(0.75 \text{ ton per hour max production rate for the curing oven}) \times (0.10 \text{ lb PM10 emissions per ton of production emissions factor}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] + [(0.0061 \text{ mm cu ft / hr max natural gas usage for the oxidizer}) \times (7.6 \text{ lbs PE/mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] = 0.53 \text{ TPY.}$

f. Emission Limitation:

Nitrogen oxides (NOx) emissions shall not exceed 1.01 pounds per hour and 4.42 tons per year (TPY).

Applicable Compliance Method:

The hourly and annual uncontrolled potential NOx emission rates for emissions unit P005 were determined based on the following equations from the permittee-supplied information in the application:

$NOx = [(0.75 \text{ ton per hour max production rate for the curing oven}) \times (0.16 \text{ lbNOx emissions per ton of production emissions factor})] + [(0.0089 \text{ mm cu ft / hr max natural gas usage}) \times (100 \text{ lbsNOx/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98})] = 1.01 \text{ pounds per hour.}$



$$\text{NOx} = [(0.75 \text{ ton per hour max production rate for the curing oven}) \times (0.16 \text{ lbNOx emissions per ton of production emissions factor}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] + [(0.0089 \text{ mm cu ft / hr max natural gas usage}) \times (100 \text{ lbsNOx/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton})] = 4.42 \text{ TPY.}$$

g. Emission Limitation:

Sulfur dioxide (SO₂) emissions shall not exceed 0.0006 pound per mmBtu of actual heat input and 0.02 ton per year (TPY).

Applicable Compliance Method:

The pound per mmBtu and annual uncontrolled potential SO₂ emission rates for emissions unit P005 were determined based on the following equations from the permittee-supplied information in the application:

$$\text{SO}_2 = (0.6 \text{ lb SO}_2/\text{mm cu ft natural gas emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) / (1000 \text{ mmBtu/mm cu ft of natural gas}) = 0.0006 \text{ pound per mmBtu.}$$

$$\text{SO}_2 = (0.0089 \text{ mm cu ft / hr max natural gas usage}) \times (0.6 \text{ lb SO}_2/\text{mm cu ft emissions factor; AP-42 Table 1.4-2, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton}) = 0.02 \text{ TPY.}$$

h. Emission Limitation:

Carbon monoxide (CO) emissions shall not exceed 0.084 pound per mmBtu of actual heat input and 3.3 tons per year (TPY).

Applicable Compliance Method:

The pound per mmBtu and annual uncontrolled potential CO emission rates for emissions unit P005 were determined based on the following equations from the permittee-supplied information in the application:

$$\text{CO} = (84 \text{ lbs CO/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98}) / (1000 \text{ mmBtu/mm cu ft of natural gas}) = 0.084 \text{ pound per mmBtu.}$$

$$\text{CO} = (0.0089 \text{ mm cu ft / hr max natural gas usage}) \times (84 \text{ lbs CO/mm cu ft emissions factor; AP-42 Table 1.4-1, dtd. 7/98}) \times (8760 \text{ hrs/yr}) / (2000 \text{ lbs/ton}) = 3.3 \text{ TPY.}$$

g) Miscellaneous Requirements

- (1) None.