



Environmental
Protection Agency

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

Certified Mail

9/13/2012

Nicole Hamilton
ASHLAND
5200 Blazer Parkway
DA-4
Dublin, OH 43017

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

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0125060525
Permit Number: P0110613
Permit Type: Initial Installation
County: Franklin

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, The Columbus Dispatch. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
122 South Front Street
Columbus, Ohio 43215

and Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 Via E-Mail Notification
Ohio EPA-CDO



Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

This facility is the headquarters for Ashland Chemical Company and conducts testing and research and development. Ashland has submitted a PTIO application for a proposed new web coating system with a natural gas fired oven (emissions unit K004).

3. Facility Emissions and Attainment Status:

Ashland is located within Franklin County, which is designated as "Nonattainment" for ozone and PM_{2.5}. Ashland's operations include a fiberglass sheet mini production and testing area (emissions unit P001) and a spray booth (emissions unit R001). These units have taken synthetic minor limitations to avoid Title V permitting requirements for individual and combined HAPs. Additionally, P001 has a federally enforceable limit of 4.6 ton/yr VOC and R001 has a federally enforceable limit of 7.3 ton/yr VOC. The synthetic minor limitations also restrict facility-wide VOC emissions to below the Title V threshold.

Ashland has requested to limit the use of coatings, adhesives, inks and cleanup materials in K004 to continue to stay below Title V thresholds. The synthetic minor strategy for HAP and VOC emissions involves recordkeeping the use of coatings, adhesives, inks and cleanup materials in K004. The appropriate operational restrictions, monitoring and recordkeeping requirements, reporting requirements and testing requirements have been established to demonstrate compliance with the synthetic minor limitations.

4. Source Emissions:

K004 is the source of VOC and HAP emissions from the use of coatings, adhesives, inks and cleanup materials in the web coating system. K004 is also the source of products of natural gas combustion from two 1 MMBtu/hr oven burners.

Since this non-Title V source burns only natural gas and therefore is considered inherently clean, the permit does not require visible emission monitoring.

Pursuant to OAC rule 3745-18-06(B) and (C), the SO₂ emissions from the burners are not subject to the regulations of OAC rules 3745-18-06 to 3745-18-94 because the source is less than 10 MMBtu/hr and 1,000 lb/hr process weight input.

The xylene and toluene emissions from K004 were modeled for the worst-case coating (solvent-based coating) using AERSCREEN. The maximum VOC content of the solvent-based coating is 70.0% by weight. Assuming all VOC are xylene, the maximum xylene concentration modeled at the fence line is less than 80% of the MAGLC. Ashland has requested to limit their toluene content in their coatings and adhesives to less than 14%. Assuming the solvent-based coating contains 14% toluene, the maximum toluene concentration modeled at the fence line is between 80% and 100% of the MAGLC. Pursuant to



ORC 3704.03(F)(4)(c), the permit limits Ashland to emitting no more than 1,011 lb/day toluene. This restriction is adequate to ensure emissions from K004 will not exceed the toluene MAGLC at the facility fence line.

5. Conclusion:

The issuance of P0110613 is recommended. The operational restrictions, monitoring/recordkeeping requirements, reporting requirements and testing requirements contained in this permit are adequate to provide federally enforceable limitations to ensure that the facility-wide Title V thresholds for VOC and HAP emissions will not be exceeded.

6. Please provide additional notes or comments as necessary:

None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
Individual HAPs	9.9
Combined HAPs	24.9
VOC	9.9

PUBLIC NOTICE

9/13/2012 Issuance of Draft Air Pollution Permit-To-Install and Operate

ASHLAND

5200 BLAZER PKWY,

Dublin, OH 43017

Franklin County

FACILITY DESC.: Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)

PERMIT #: P0110613

PERMIT TYPE: Initial Installation

PERMIT DESC: Initial permit for the installation and operation of a new web coating machine with an oven.

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the permit # or: Pamela McCoy, Ohio EPA DAPC, Central District Office, 50 West Town Street, 6th Floor P.O. Box 1049, Columbus, OH 43216-1049. Ph: (614)728-3778

Ohio

**Environmental
Protection Agency**

DRAFT

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

Facility ID:	0125060525
Permit Number:	P0110613
Permit Type:	Initial Installation
Issued:	9/13/2012
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install and Operate
for
ASHLAND

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Authorization

Facility ID: 0125060525
 Application Number(s): A0044632
 Permit Number: P0110613
 Permit Description: Initial permit for the installation and operation of a new web coating machine with an oven.
 Permit Type: Initial Installation
 Permit Fee: \$200.00 *DO NOT send payment at this time, subject to change before final issuance*
 Issue Date: 9/13/2012
 Effective Date: To be entered upon final issuance
 Expiration Date: To be entered upon final issuance
 Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

ASHLAND
 5200 BLAZER PKWY
 Dublin, OH 43017

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

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

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

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and Federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
 Director



Authorization (continued)

Permit Number: P0110613

Permit Description: Initial permit for the installation and operation of a new web coating machine with an oven.

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

Emissions Unit ID:	K004
Company Equipment ID:	Web Coating System
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



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 Ohio EPA DAPC, Central District Office 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.

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.

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).

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.

B. Facility-Wide Terms and Conditions



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

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

(1) None.

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

(1) 2.a) through 2.e)

2. Applicable Emissions Limitations and/or Control Requirements

a) The specific operations, property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and applicable emissions limitations and/or control measures are set forth 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(D) (Synthetic minor to avoid Title V)	See b)(1) below.

b) Additional Terms and Conditions

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

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

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

c) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for the purpose of calculating the rolling, 12-month summation of HAP emissions:



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

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

d) Reporting Requirements

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

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

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

e) Testing Requirements

- (1) Compliance with the emission limitations specified in 2.b)(1) above shall be determined in accordance with the following methods:



a. Emissions Limitations

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

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

Applicable Compliance Method

The permittee shall calculate HAP emissions in accordance with the recordkeeping requirements specified in d)(1) using U.S. EPA approved emissions factors or emissions factors otherwise approved by Ohio EPA, Central District Office.

C. Emissions Unit Terms and Conditions



1. K004, Web Coating System

Operations, Property and/or Equipment Description:

Web Coating System with Oven

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. b)(1)f., b)(2)d., d)(3) through d)(6) and e)(3).

(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)c., b)(2)e., d)(2) and e)(1).

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 3745-17-07(A)(1)	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.
b.	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input.
c.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Title V)	<p>Volatile organic compound (VOC) emissions shall not exceed 9.9 tons per rolling, 12-month period.</p> <p>See b)(2)e. below.</p>
d.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	<p>Volatile organic compound (VOC) emissions shall not exceed 5,064.5lb/day.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.16 lb/hr and 0.72 ton/yr.</p> <p>Nitrogen oxide (NOx) emissions shall not</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>exceed 0.20 lb/hr and 0.86 ton/yr.</p> <p>Particulate emissions (PE) shall not exceed 0.015lb/hr and 0.065 ton/yr.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.001 lb/hr and 0.005 ton/yr.</p> <p>See b)(2)a. and b)(2)c.below.</p>
e.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b. below.
f.	ORC 3704.03(F)(4)(c) (Toxic air contaminant statute)	See b)(2)d. below.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.
- b. The following rule paragraphs will apply once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:
 - i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC, CO, NO_x, PE and SO₂ emissions from this air contaminant source since the potentials to emit are less than 10 tons per year.
- c. The daily VOC emission limitation as well as the hourly and annual CO, NO_x, PE and SO₂ emission limitations were established to reflect the potential to emit for this emissions unit in accordance with the information provided in the application. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.
- d. In order to demonstrate compliance with the "Toxic Air Contaminant Statute", the director has established, per ORC 3704.03(F)(4)(c), a limit for toluene, which

shall not exceed 1,011 pounds per day. This daily allowable emissions rate was calculated by multiplying the approved daily operating schedule submitted in the permit application, by the emission rate modeled (to determine the ground level concentration).

- e. The emissions of VOC from this emissions unit shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation of emissions from coatings, adhesives, inks, cleanup materials as follows:

$$9.9 \text{ tons VOC} \geq \sum_{i=1}^n (Q_i)(VOC_i) \div 2000 \text{ pounds/ton}$$

Where:

Q_i = actual usage of coating/adhesives/inks/cleanup material i, gallons

VOC_i = actual VOC content of coating/adhesives/inks/cleanup material in i, pounds per gallon.

To ensure enforceability during the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:

Month(s)	Maximum Allowable Cumulative VOC Emissions (Tons)
1	0.83
1-2	1.65
1-3	2.48
1-4	3.30
1-5	4.13
1-6	4.95
1-7	5.78
1-8	6.60
1-9	7.43
1-10	8.25
1-11	9.08
1-12	9.90

After the first 12 calendar months following the issuance of this permit, compliance with the annual emission limitation for VOC shall be based upon a rolling, 12-month summation of the VOC emissions from coatings, adhesives, inks, cleanup materials and fuel burning in the oven.

- c) Operational Restrictions

(1) The permittee shall burn only natural gas in this emissions unit.

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

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

(2) The permittee shall maintain monthly records of the following information:

- a. the name and identification number of each coating, adhesive, ink and cleanup material employed;
- b. the VOC content of each coating, adhesive, ink and cleanup material employed;
- c. the amount of each coating, adhesive, ink and cleanup material employed;
- d. the number of hours the oven operated; and
- e. the total VOC emissions, in tons; and
- f. beginning after the first 12 calendar months of operation, the rolling, 12-month VOC emissions, in tons.

Also, during the first 12 calendar months of operation, the permittee shall record the cumulative VOC emissions for each calendar month.

(3) The permit application for this emissions unit, K004, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant emitted using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration results from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";
or

- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "24" hours per day and "7" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants:

Toxic Contaminant: xylene

TLV (mg/m³): 434

Maximum Hourly Emission Rate (lb/hr): 210.7

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 7,606

MAGLC (ug/m³): 10,338

Toxic Contaminant: toluene

TLV (mg/m³): 75

Maximum Hourly Emission Rate (lb/hr): 42.14

Predicted 1-Hour Maximum Ground Level Concentration (ug/m³): 1,521

MAGLC (ug/m³): 1,794

The permittee, having demonstrated that emissions of xylene from emissions unit K004 is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC) and emissions of toluene from emissions unit K004 is estimated to be equal or greater than eighty per cent, but less than 100 per cent of the MAGLC, shall not operate the emissions unit at a rate that would exceed the daily emissions rate, process weight rate, and/or restricted hours of operations, as allowed in this permit; and any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

- (4) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the

predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

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

If the permittee determines that the "Toxic Air Contaminant Statute", ORC 3704.03(F), will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final permit prior to the change. The director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

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

- (6) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all exceedances of the rolling, 12-month emission limitation for VOC and, for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels.
 - 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 Ohio EPA, Central District Office).

- (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 eBusiness 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 include in the annual Permit Evaluation Report (PER) any exceedance of the daily limitation on toxic air emissions, as established by the director, in order to maintain any toxic air contaminant below its MAGLC. The permittee shall also include in the PER any changes made, during the calendar year, to a parameter or value entered into the dispersion model that was used to maintain compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions, emissions unit, or the exhaust stack have been made, then the report shall include a statement to this effect.
- (4) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

(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

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

b. Emission Limitation

Particulate emissions (PE) shall not exceed 0.020 pound per million Btu of actual heat input.

Applicable Compliance Method

If required, compliance with the PE limitation shall be determined in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

c. Emissions Limitation

Volatile organic compound (VOC) emissions shall not exceed 9.9 ton/yr, based upon a rolling 12-month summation.

Applicable Compliance Method

Compliance shall be based upon the summation of the VOC emissions from coatings, adhesives, inks, cleanup materials and fuel burning in the oven.

VOC emissions from each coating, adhesive, ink and cleanup material shall be calculated using the following equation.

$$9.9 \text{ tons VOC} \geq \sum_{i=1}^n (Q_i)(VOC_i) \div 2000 \text{ pounds/ton}$$

Where:

Q_i = actual usage of coating/adhesives/inks/cleanup material i, gallons

VOC_i = actual VOC content of coating/adhesives/inks/cleanup material in i, pounds per gallon.

VOC emissions from fuel burning in the oven shall be calculated using the VOC emission factor (EF) specified in the most recent version of AP-42, "Compilation of Air Pollutant Emission Factors" and the following equation.

$$\text{VOC}_{\text{fuel burning}} = \text{EF} \times 2 \text{ MMBtu/hr} \times \text{hours operated}$$

d. Emission Limitation

Volatile organic compound (VOC) emissions shall not exceed 5,064.5lb/day (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method

The daily allowable mass emission rate for VOC was established by summing the maximum daily VOC emissions from coatings, adhesives, inks, cleanup materials and fuel burning in the oven.

The maximum daily VOC emissions from coatings, adhesives and inks were calculated for the worst-case material (solvent-based coating) using the following equation.

$$\text{VOC}_{\text{solvent-based coating}} = \text{coating usage} \times \text{VOC content, where:}$$

$$\text{Maximum solvent-based coating usage} = 301\text{lb/hr} \times 24 \text{ hr/day}$$

$$\text{Solvent-based coating VOC content} = 70\% \text{ by weight}$$

The maximum daily VOC emissions from cleanup materials were calculated using the following equation.

$$\text{VOC}_{\text{cleanup solvent}} = \text{cleanup solvent usage} \times \text{VOC content, where:}$$

$$\text{Maximum cleanup solvent usage} = 1 \text{ gal/day}$$

$$\text{Maximum VOC content} = 7.50 \text{ lb/gal}$$

If the composition of the worst-case coating or cleanup solvent changes, or a new worst-case coating or cleanup solvent is applied in this emissions unit, then the above calculations should be adjusted to account for the properties of the new material.

The maximum daily VOC emissions from fuel burning in the oven were calculated using the VOC emission factor specified in AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-2 (7/98) and the following equation.

$$\text{VOC}_{\text{fuel burning}} = \text{EF} \times 2 \text{ MMBtu/hr} \times 24 \text{ hr/day, where}$$

$$\text{EF} = (5.5 \text{ lb VOC}/10^6\text{scf}) / (1,020 \text{ Btu/scf})$$

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 18, 25 or 25A.

e. Emission Limitation

Carbon monoxide (CO) emissions shall not exceed 0.16 lb/hr and 0.72 ton/yr (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method

The hourly allowable mass emission rate for CO was established using the CO emission factor specified in AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-1 (7/98) and the following equation.

CO = EF x 2 MMBtu/hr, where

$$EF = (84 \text{ lb CO}/10^6\text{scf}) / (1,020 \text{ Btu}/\text{scf})$$

The annual limitation was calculated by multiplying the hourly limitation by 8,760 hr/yr and then dividing by 2,000 lb/ton.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 10.

f. Emission Limitation

Nitrogen oxide (NO_x) emissions shall not exceed 0.20lb/hr and 0.86 ton/yr (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method

The hourly allowable mass emission rate for NO_x was established using the NO_x emission factor specified in AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-1 (7/98) and the following equation.

NO_x = EF x 2 MMBtu/hr, where

$$EF = (100\text{lbNO}_x/10^6\text{scf}) / (1,020 \text{ Btu}/\text{scf})$$

The annual limitation was calculated by multiplying the hourly limitation by 8,760 hr/yr and then dividing by 2,000 lb/ton.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.

g. Emission Limitation

Particulate emissions (PE) shall not exceed 0.015lb/hr and 0.065 ton/yr(as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method

The hourly allowable mass emission rate for PE was established using the PE emission factor specified in AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-2 (7/98) and the following equation.

$PE = EF \times 2 \text{ MMBtu/hr}$, where

$$EF = (7.6\text{lbPE}/10^6\text{scf}) / (1,020 \text{ Btu/scf})$$

The annual limitation was calculated by multiplying the hourly limitation by 8,760 hr/yr and then dividing by 2,000 lb/ton.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

h. Emission Limitation

Sulfur dioxide (SO₂) emissions shall not exceed 0.001 lb/hr and 0.005 ton/yr(as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method

The hourly allowable mass emission rate for SO₂ was established by using the SO₂ emission factor specified in AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-2 (7/98) and the following equation.

$SO_2 = EF \times 2 \text{ MMBtu/hr}$, where

$$EF = (0.6 \text{ lb } SO_2/10^6\text{scf}) / (1,020 \text{ Btu/scf})$$

The annual limitation was calculated by multiplying the hourly limitation by 8,760 hr/yr and then dividing by 2,000 lb/ton.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 6C.

i. Emission Limitation

Toluene emissions shall not exceed 1,011 pounds per day.



Applicable Compliance Method

The maximum daily toluene emissions from coatings, adhesives and inks were calculated for the worst-case material (solvent-based coating) using the following equation.

$VOC_{\text{solvent-based coating}} = \text{coating usage} \times \text{toluene content}$, where:

Maximum solvent-based coating usage = 301lb/hr x 24 hr/day

Solvent-based coating toluene content = 14% by weight

g) Miscellaneous Requirements

(1) None.