



Environmental
Protection Agency

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

1/9/2012

MICHAEL DESGRANGES
CAPITAL RESIN CORP
324 DERING AVE
COLUMBUS, OH 43207

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0125040238
Permit Number: P0109009
Permit Type: OAC Chapter 3745-31 Modification
County: Franklin

Certified Mail

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)

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
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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

PUBLIC NOTICE

1/9/2012 Issuance of Draft Air Pollution Permit-To-Install and Operate

CAPITAL RESIN CORP
324 DERING AVENUE,
COLUMBUS, OH 43207

Franklin County

FACILITY DESC.: All Other Basic Organic Chemical Manufacturing

PERMIT #: P0109009

PERMIT TYPE: OAC Chapter 3745-31 Modification

PERMIT DESC: Modification of PTI 01-6746 to allow for greater operational flexibility in emission units P006 and P013

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



Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

The facility is an existing resin manufacturing facility located at 324 Dering Ave., in Columbus, Ohio. The facility manufactures resins to customer specifications. The resins manufactured are toluene sulfonic acids (TSAs), phenol sulfonic acids (PSAs), paratertiary octophenols (PTOs), and other methanol blends. The sources in this application are two acid reactors: P006 (facility name is AR-1) and P013 (facility name is AR-2). The requested increases will not increase allowable HAP emissions for the facility, currently at 9.9 tons individual HAP/year and 24.9 tons combined HAP/year, nor increase the VOC emissions from the facility, currently at 99.9 tons per year. The requested emission limitations will change the daily and annual emissions from the individual sources.

3. Facility Emissions and Attainment Status:

Facility emissions are primarily VOC and HAP. The facility has accepted federally enforceable restrictions to avoid being subject to 40 CFR 63, Subpart OOO (Manufacture of Amino/Phenolic resins) and 40 CFR 63, Subpart FFFF (Misc. Organic Chemical Manufacturing – 63.2430 – 63.2550). The facility is subject to NSPS for leaks from organic processes. The facility is located in Franklin County, Ohio, which is in attainment for all criteria pollutants.

4. Source Emissions:

The two emission units are acid reactors manufacturing toluene sulfonic acid (TSA), phenol sulfonic acid (PSA) and paratertiary octylphenol (PTO). TSA and PSA both have HAP emissions while PTO does not. Emissions are HAP and VOC. Emissions are controlled by a condenser. Both emission units are subject to OAC 3745-31-05(A)(3), as effective 11/30/2001 and 12/01/2006, OAC 3745-31-05(D), ORC 3704.03(F)(3)(c) and (F)(4), OAC 3745-21-09(DD), and 40 CFR 60.480-489 (40 CFR Part 60, Subpart VV).

Several equations from U.S. EPA Guidance Series "Control of Volatile Organic Compound Emissions from Batch Processes" (EPA 453/R-93-017, February 1994) are used to determine actual hourly and annual emissions. Based upon these equations, the facility submitted maximum hourly pound per hour emissions during each batch and pound per batch emissions with application PTI 01-6746. The calculations are attached to this permit detail for reference.

At the request of the facility, hourly emissions of methanol, toluene and VOC will be potential for the emission unit; however, annual emissions will be limited based upon the number of batches performed in the emissions unit. Potential annual emissions from the emissions unit keep the emissions unit under any additional permitting thresholds, therefore the batch number restriction will not be included as an additional term and condition of the permit.

5. Conclusion:

Permit monitoring and recordkeeping, while maintaining compliance with other terms and conditions in the permit, should ensure compliance with applicable state and federal rules.

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>
<u>Methanol</u>	<u>0.36</u>
<u>Toluene</u>	<u>0.56</u>
<u>VOC</u>	<u>0.85</u>



DRAFT

**Division of Air Pollution Control
Permit-to-Install and Operate
for
CAPITAL RESIN CORP**

Facility ID:	0125040238
Permit Number:	P0109009
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	1/9/2012
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
CAPITAL RESIN CORP

Table of Contents

Authorization 1
A. Standard Terms and Conditions 3
1. What does this permit-to-install and operate ("PTIO") allow me to do?..... 4
2. Who is responsible for complying with this permit? 4
3. What records must I keep under this permit? 4
4. What are my permit fees and when do I pay them?..... 4
5. When does my PTIO expire, and when do I need to submit my renewal application? 4
6. What happens to this permit if my project is delayed or I do not install or modify my source? 5
7. What reports must I submit under this permit? 5
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? 5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ... 5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report? 6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located? 6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently? 6
13. Can I transfer this permit to a new owner or operator?..... 7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"? 7
15. What happens if a portion of this permit is determined to be invalid? 7
B. Facility-Wide Terms and Conditions..... 8
C. Emissions Unit Terms and Conditions 11
1. Emissions Unit Group -Acid Room Reactors: P006,P013,..... 12



Authorization

Facility ID: 0125040238
Application Number(s): A0043040
Permit Number: P0109009
Permit Description: Modification of PTI 01-6746 to allow for greater operational flexibility in emission units P006 and P013
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: \$400.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 1/9/2012
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:

CAPITAL RESIN CORP
324 DERING AVENUE
COLUMBUS, OH 43207

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: P0109009
Permit Description: Modification of PTI 01-6746 to allow for greater operational flexibility in emission units P006 and P013

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

Group Name: Acid Room Reactors

Emissions Unit ID:	P006
Company Equipment ID:	AR-1
Superseded Permit Number:	01-6746
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P013
Company Equipment ID:	AR-2
Superseded Permit Number:	01-6746
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.

¹ Permittees 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.

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) The emissions of HAPs, as identified in Section 112(b) of Title III of the Clean Air Act, from all emissions units at this facility as well as any de minimis emissions units, permanent exempt pursuant to OAC rule 3745-31-03 located at the facility and any future installed emissions units, combined, shall not exceed 9.9 TPY for any individual HAP and 24.9 TPY for any combination of HAPs, based upon rolling, 12-month summations of the HAP emissions.
 - (2) The emissions of volatile organic compounds (VOCs) from all emissions units at this facility, as well as any de minimis emissions units, permanent exempt pursuant to OAC rule 3745-31-03 located at the facility and any future installed emission units, combined, shall not exceed 99.9 tons per year, based upon a rolling, 12-month summation of the VOC emissions.
 - (3) Recordkeeping Requirements

The permittee shall on a monthly basis maintain the following information for the entire facility:

 - a. the rolling, 12-month summation of individual HAP emissions;
 - b. the rolling, 12-month summation of combined HAP emissions; and
 - c. the rolling, 12-month summation of VOC emissions.
 - (4) Reporting Requirements:

The permittee shall submit quarterly deviation (excursion) reports that identify:

 - a. all exceedances of the rolling, 12-month individual HAP emission limitation;
 - b. all exceedances of the rolling, 12-month combined HAP emission limitation; and
 - c. all exceedances of the rolling, 12-month VOC 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.

(5) Applicable Compliance Method

Compliance with these rolling, 12-month VOC, individual HAP, and combined HAP emission limitations shall be determined through emission unit specific monitoring and recordkeeping requirements for the entire facility.

C. Emissions Unit Terms and Conditions



1. Emissions Unit Group -Acid Room Reactors: P006,P013,

EU ID	Operations, Property and/or Equipment Description
P006	Toluene Sulfonic Acid (TSA), Phenol Sulfonic Acid (PSA), Paratertiary-Octylphenol (PTO) and Methanol Blends Manufacturing Reactor
P013	Manufacture of Toluene Sulfonic Acid, Organic Blends, Paratertiary Octyl phenol

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. and d)(22).

(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) 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), as effective 11/30/2001	<p>Emissions shall not exceed:</p> <p><u>Emissions unit P006</u> 1.1 pounds per hour and 0.24 ton per year of methanol emissions.</p> <p>0.35 pounds per hour and 0.28 ton per year of toluene emissions.</p> <p>1.10 pounds per hour and 0.57 ton per year of volatile organic compound (VOC) emissions.</p> <p><u>Emissions unit P013</u> 0.22 pound per hour and 0.12 ton per year of methanol emissions.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		0.35 pound per hour and 0.28 ton per year of toluene emissions. 2.16 pounds per hour and 0.28 ton per year of volatile organic compound (VOC) emissions. The requirements of this rule also include compliance with the requirements of OAC 3745-21-09(DD) and 40 CFR Part 60, Subpart VV. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3), as effective 12/01/2006	See b)(2)b.
c.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Title V and MACT)	See B.1)(b). [Facility-Wide Terms and Conditions]
d.	OAC rule 3745-21-09(DD)	See b)(2)c., b)(2)d., and d)(1) – d)(3).
e.	40 CFR 60.480 – 40.489 (40 CFR Part 60, Subpart VV)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-21-09(DD).
f.	ORC 3704.03(F)(3)(c) and (F)(4)	See d)(22).

(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. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the volatile organic compound (VOC) emissions from

this air contaminant source since the uncontrolled potential to emit for VOC is less than 10 tons/year.

- c. All of the VOC emissions from this emissions unit shall be vented to a condenser that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.
- d. The permittee shall vent the reactor condenser vapors to an activated carbon canister that is designed and operated either to reduce VOC emissions during toluene sulfonic acid (TSA) vacuum strip phase or acid blending with an efficiency of 50%, by weight, or to emit VOC at a concentration less than 1,000 parts per million (ppm), by volume, dry basis.
- e. The permittee of the process unit, producing one or more of the organic chemicals identified in Appendix A to OAC 3745-21-09 as an intermediate or final product, shall comply with the requirements identified in OAC 3745-21-09 paragraphs (DD)(2) to (DD)(6).

[OAC 3745-21-09(DD)(1)]

- f. The permittee shall develop and implement a leak detection and repair program for the process unit in accordance with the requirements specified in OAC 3745-21-09 paragraphs (DD)(2)(b) to (DD)(2)(m). The following definitions shall apply to the LDAR plan:
 - i. "In gas/vapor service" means that the piece of equipment contains or contacts process fluid that is in the gaseous state at the operating conditions.
 - ii. "In heavy liquid service" means that the piece of equipment is not in gas/vapor service or in light liquid service.
 - iii. "In light liquid service" means that the piece of equipment contains or contacts process fluid that meets the conditions specified in paragraph (O)(3) of rule 3745-21-10 of the Administrative Code.
 - iv. "Insitu sampling system" means a nonextractive sampler or an in-line sampler.
 - v. "In vacuum service" means that the piece of equipment is operating at an internal pressure that is at least 0.7 pound per square inch below ambient pressure.
 - vi. "In VOC service" means that the piece of equipment contains or contacts a process fluid that is at least ten per cent VOC by weight.

c) Operational Restrictions

(1) When a leak is detected the following procedures shall be followed:

- a. a weatherproof identification tag with the equipment identification number and the date shall be immediately attached to the leaking equipment;

- b. a record of the leak, the date it was first detected, and any attempt to repair the leak and date is entered into the leak repair log;
- c. an identification tag that was attached to a leaking valve “in gas/vapor service” or “in light liquid service” may be removed only after the valve is repaired and found to have no leaks for two consecutive months; and
- d. an identification tag attached to leaking equipment that is exempted from the monitoring requirements of OAC 3745-21-09(DD)(2)(b) may be removed immediately following the repair of the leak.

[OAC 3745-21-09(DD)(2)(h)]

- (2) Repair of a leak shall be attempted no later than 5 calendar days after it is detected, where practicable, and shall include, but not limited to, the following best maintenance practices:

- a. tightening of bonnet bolts;
- b. replacement of bonnet bolts;
- c. tightening of packing gland nuts; and
- d. injection of lubricant into lubricated packing.

[OAC 3745-21-09(DD)(2)(j)]

- (3) Except where meeting one of the conditions defined in OAC 3745-21-09(DD)(11), where a delay in repair is allowed, a leak shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected. Leaking equipment shall be deemed repaired if the maximum VOC concentration is measured to be less than 10,000 ppmv.

[OAC 3745-21-09(DD)(2)(i)]

- (4) Each compressor shall be equipped with a seal that has a barrier fluid system and sensor which comply with the requirements specified in OAC 3745-21-09(DD)(8), with the following exceptions:

- a. any compressor designated for “no detectable emissions”, and meeting the requirements of OAC 3745-21-09 (DD)(7).
- b. any compressors equipped with a closed vent system capable of capturing and transporting any leakage from the compressor seal to control equipment, where the closed vent system and the control equipment comply with the requirements specified in OAC 3745-21-09(DD)(9) and (DD)(10).
- c. any reciprocating compressor that meets the following conditions:
 - i. the compressor was installed prior to May 9, 1986; and
 - ii. the permittee demonstrates, to the satisfaction of the Director, that recasting the compressor distance piece or replacing the compressor are

the only options available to bring it into compliance with the requirements to equip it with a seal with a barrier fluid system and sensor.

[OAC 3745-21-09(DD)(3)(a) through (e)]

- (5) Except as otherwise provided below, any pressure relief device “in gas/vapor service” in the process unit shall comply with the following requirements:
- a. Except during pressure releases, the pressure relief device shall be operated with “no detectable emissions”, as indicated by an instrument reading of less than 500 ppmv above background, as measured by the method specified in OAC 3745-21-10(F)
 - b. No later than 5 calendar days after a pressure release, a pressure relief device shall be tested to confirm the condition of “no detectable emissions” in accordance with the method specified in OAC 3745-21-10(F).
 - c. Except for a delay of repair as provided in OAC 3745-21-09(DD)(11), a pressure relief device shall be returned to a condition of “no detectable emissions” as soon as practicable, but no later than 5 calendar days after a pressure release.

Any pressure relief device that is equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to control equipment meeting the requirements specified in OAC 3745-21-09(DD)(9) and (DD)(10) is excluded from these requirements.

[OAC 3745-21-09(DD)(4)(a) through (e)]

- (6) With the exception of an “in-situ sampling system” (a non-extractive sampler or an in-line sampler), each sampling connection system in the process unit shall be equipped with a closed purge system or a closed vent system that meets one of the following requirements:
- a. the purged process fluid is returned directly to the process line with zero VOC emissions to the ambient air;
 - b. the purged process fluid is collected and recycled with zero VOC emissions to the ambient air; or
 - c. the closed purge system or closed vent system is designed and operated to capture and transport all the purged process fluid to control equipment that meet the control equipment requirements specified in OAC 3745-21-09(DD)(10).

[OAC 3745-21-09(DD)(5)(a) through (c)]

- (7) Each open-ended valve or line in the process unit shall be equipped with a cap, blind flange, plug, or second valve which shall comply with the following requirements:
- a. Except during operations requiring the flow of process fluid through the open-ended valve or line, the cap, blind flange, plug, or second valve shall seal the open end of the open-ended valve or line.

- b. If equipped with a second valve, the open-ended valve or line shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
- c. A bleed valve or line from a double block and bleed system may remain open during operations that require venting the line between the block valves, but the line/valve shall be sealed (as in "a" above) at all other times.

[OAC 3745-21-09(DD)(6)(a) through (d)]

- (8) A pump or compressor equipped with a seal that has a barrier fluid system and sensor, which are employed to meet the requirements of OAC 3745-21-09(DD)(2)(d)(ii) for a pump or 3745-21-09(DD)(3)(a) and (b) for a compressor, shall be operated and maintained to comply with the following requirements.
 - a. The barrier fluid system shall meet one of the three following conditions:
 - i. The barrier fluid system is operated with a barrier fluid at a pressure that is greater, at all times, than the stuffing box pressure of the pump or compressor.
 - ii. The barrier fluid system is equipped with a barrier fluid degassing reservoir that is connected by a closed vent system to control equipment and the closed vent system and control equipment comply with the requirements specified in OAC 3745-21-09(DD)(9) and (DD)(10).
 - iii. The barrier fluid system is equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the ambient air.
 - b. The barrier fluid system shall be "in heavy liquid service" or shall not be "in VOC service".
 - c. The barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both, based on design criteria and operating experience of the permittee.
- (9) A delay of the repair of a detected leak or a delay in returning a pressure relief valve/device to a condition of "no detectable emissions" shall be allowed only if complying with the following requirements:
 - a. A delay of repair shall be allowed if the repair is technically infeasible without shutdown of the process unit. However, the repair shall occur before the end of the next process unit shutdown.
 - b. A delay of repair shall be allowed for a piece of equipment that is isolated from the process and that does not remain "in VOC service" (for example, isolated from the process and properly purged).
 - c. A delay of repair for a valve shall be allowed if:

- i. it can be demonstrated that the emissions from purged material resulting from immediate repair is greater than the emissions likely to result from delay of repair; and
 - ii. the purged material is collected and destroyed or recovered in control equipment that meets the requirements specified in OAC 3745-21-09(DD)(10).
- d. A delay of repair for a valve beyond a process unit shutdown shall be allowed if:
- i. a valve assembly replacement is necessary during the process unit shutdown, and
 - ii. the valve assembly supplies have been depleted, and
 - iii. valve assembly supplies had been sufficiently stocked before the supplies were depleted.

A delay of repair beyond the next process unit shutdown shall not be allowed for the valve unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

- e. A delay of repair for a pump shall be allowed if:
- i. the repair requires the use of a dual mechanical seal system and associated barrier fluid system; and
 - ii. the repair is completed as soon as practicable, but no later than 6 months after the leak was detected.

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

- (1) The average temperature of the exhaust gases from the condenser, for any 3-hour block of time when the emission unit controlled by the condenser is in operation, shall not exceed 100 degrees Fahrenheit.
- (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder which measures and records the temperature of the exhaust gases from the condenser when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit controlled by the condenser was in operation, during which the average temperature of the exhaust gases from the condenser was greater than 100 degrees Fahrenheit; and

- b. a log of the downtime for the capture (collection) system, condenser, and monitoring equipment when the associated emissions unit(s) was/were in operation.
- (3) Whenever the monitored temperature of the exhaust gases from the condenser deviates from the range/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:

- a. a description of the corrective action;
 - b. the date corrective action was completed;
 - c. the date and time the deviation ended;
 - d. the total period of time (in minutes) during which there was deviation;
 - e. the temperature readings of the exhaust gas from condenser immediately after the corrective action was implemented; and
 - f. 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 exhaust gas 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 exhaust gas temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable VOC emission rate for the controlled emissions unit(s). In addition, approved revisions to the exhaust gas 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.

[OAC rule 3745-31-05(D)]

- (4) The permittee shall maintain monthly records of the following information:
- a. the number of PSA, TSA, and PTO batches made during each month; and
 - b. the rolling, 12-month summation of the number of PSA, TSA, and PTO batches.
- (5) The activated carbon shall be replaced in the activated carbon canister whenever the outlet gas concentration exceeds an action level of 1,000 parts per million (ppm) on the OVA 108 monitor, or other Method 21 device, approved for use in the LDAR program during monthly monitoring during vacuum strip phase of toluene sulfonating or methanol charge phase of acid blending.
- (6) Except as otherwise provided in OAC 3745-21-09(DD)(2)(c) and (DD)(2)(d), equipment shall be monitored for leaks in accordance with the method specified OAC 3745-21-10(F) and as follows:
- a. Any pump “in light liquid service” shall be monitored monthly.
 - b. Any valve “in gas/vapor service” or “in light liquid service” shall be monitored monthly, except that quarterly monitoring may be employed where no leaks are detected during two consecutive months. Quarterly monitoring may begin with the next calendar quarter following the two consecutive months of no detected leaks. Monitoring shall be conducted in the first month of each calendar quarter; and quarterly monitoring may continue until a leak is detected, at which time monitoring shall again be employed monthly.

[OAC 3745-21-09(DD)(2)(b)(ii)]

- c. The following equipment shall be monitored within 5 calendar days after evidence of a leak or potential leak from the equipment by visual, audible, olfactory, or other detection method:
 - i. a pump “in heavy liquid service”;
 - ii. a valve “in heavy liquid service”;
 - iii. a pressure relief device “in light liquid service” or “in heavy liquid service”;
and
 - iv. a flange or other connector.
- d. Any equipment in which a leak is detected, as defined in OAC 3745-21-09(DD)(2)(g), shall be monitored within 5 working days after each attempt to repair it, unless the equipment was not successfully repaired.

[OAC 3745-21-09(DD)(2)(b)]

- (7) For any valve “in gas/vapor service” or “in light liquid service”, an alternative monitoring schedule may be employed, in lieu of the monitoring schedule specified in OAC 3745-21-09(DD)(2)(b)(ii), above, if meeting one of the three following requirements:
- a. The valve is designated as “difficult to monitor” and is monitored once each calendar year if meeting all of the following conditions:
 - i. construction of the process unit commenced prior to May 9, 1986;
 - ii. the permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 6 feet above a support surface; and
 - iii. the permittee has a written plan that requires monitoring of the valve at least once per year.
 - b. The valve is designated as “unsafe to monitor” and is monitored as frequently as practical during times when it is safe to monitor, provided the following conditions are met:
 - i. the permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of monitoring on a monthly basis; and
 - ii. the permittee adheres to a written plan that requires monitoring of the valve as frequently as practical during times when it is safe to monitor.
 - c. The valve qualifies for an alternative monitoring schedule based on a “skip period” as allowed per OAC 3745-21-09(DD)(12).

[OAC 3745-21-09(DD)(2)(c)]

- (8) The permittee may elect to implement an alternative monitoring schedule, to that of OAC 3745-21-09(DD)(2)(b)(ii) and as identified below, for the process unit valves if the following conditions are met:
- a. no more than 2.0% of the process unit valves are leaking;
 - b. the permittee notifies the Director (the appropriate district office or local air agency) prior to implementing the alternative monitoring schedule; and such notification identifies:
 - i. which valves will be subject to the alternative monitoring schedule; and
 - ii. which work practice, identified in OAC 3745-21-09(DD)(12)(e), will be implemented;
 - c. the permittee monitors the valves initially monthly, to quarterly, as allowed and according to the requirements specified in OAC 3745-21-09(DD)(2)(b)(ii); and
 - d. the valves continue to meet with the conditions specified in OAC 3745-21-09(DD)(2)(g) to (DD)(2)(m).

If meeting all of the above conditions (“a” through “d”), one of the following monitoring periods for valve leak detection may be implemented:

- a. after two consecutive quarterly leak detection periods with 2.0% or less of the process unit valves leaking, a monitoring program may begin in which the first quarter of every two consecutive quarterly leak detection periods is skipped; or
- b. after 5 consecutive quarterly leak detection periods with 2.0% or less of the process unit valves leaking, a monitoring program may begin in which the first three quarters of every four consecutive quarterly periods is skipped.

The alternative monitoring schedule shall be based on skipping quarterly monitoring periods. Any valve “in vacuum service”, “in heavy liquid service”, or not “in VOC service” shall be excluded from the monitoring schedule. If the percentage of valves leaking from the process unit becomes greater than 2.0%, the permittee shall again comply with the monitoring requirements specified in OAC 3745-21-09(DD)(2)(b)(ii), but may revert to this alternative monitoring schedule after meeting and documenting all of the above requirements.

[OAC 3745-21-09(DD)(12)(a) through (f)] for [OAC 3745-21-09(DD)(2)(c)(iii)]

- (9) The percentage of valves leaking, used to qualify for “skipped period” alternative monitoring schedule, shall be determined as the sum of the number of those valves found leaking during any portion of the current monitoring period and the number of those valves found leaking during a previous monitoring period for which repair has been delayed during the current monitoring period, divided by the total number of valves, and multiplied by 100.

[OAC 3745-21-09(DD)(12)(g)]

- (10) The following information shall be recorded in a log, that is kept in a readily accessible location, if the “skipped period” alternative monitoring schedule for leak detection of process unit valves is established:
 - a. the identification numbers of the valves subject to the alternative monitoring schedule;
 - b. the schedule established for monitoring the subject valves;
 - c. the valves exempt from the alternative monitoring schedule and reason for the exemption, i.e., “in vacuum service”, “in heavy liquid service”, or not “in VOC service”;
 - d. the percentage of valves leaking during each monitoring period; and
 - e. the maximum instrument reading and date each valve was monitored.

[OAC 3745-21-09(DD)(12)(a), (b), and (h)]

- (11) The permittee may elect to implement an alternative monitoring schedule to that of OAC 3745-21-09(DD)(2)(b)(ii) for the process unit valves, as provided in OAC 3745-21-09(DD)(2)(d)(v), if the following conditions are met:

- a. it can be demonstrated that no more than 2.0% of the process unit valves are leaking;
- b. the permittee notifies the Director (the appropriate district office or local air agency) prior to implementing the alternative monitoring standard;
- c. the demonstration of compliance to document that the percentage of valves leaking does not exceed 2.0% is conducted initially upon implementation and annually thereafter and as follows:
 - i. all valves subject to the alternative monitoring standard shall be monitored for leaks within a one-week period by the method specified in OAC 3745-21-10(F);
 - ii. any leak detected and measured with an instrument reading of 10,000 ppmv or greater shall be recorded as a leak; and
 - iii. the percentage of valves leaking shall be determined as the number of valves for which a leak is detected, divided by the number of valves monitored, and multiplied by 100.

All valves "in gas/vapor service" or "in light liquid service" in the process unit shall be subject to this alternative monitoring standard, except for valves not "in VOC service", valves "in vacuum service", and valves which are designated as unsafe to monitor as provided in OAC 3745-21-09(DD)(2)(c)(ii).

[OAC 3745-21-09(DD)(13)(a) through (e)] for [OAC 3745-21-09(DD)(2)(d)(v)]

- (12) When a leak is detected as described above, the leaking valve shall be repaired in accordance with OAC 3745-21-09(DD)(2)(h) and (DD)(2)(i). If the percentage of valves leaking from the process unit becomes greater than 2.0%, the permittee shall again comply with the monitoring requirements specified in OAC 3745-21-09(DD)(2)(b)(ii), but may revert to this alternative monitoring schedule after meeting and documenting all of the above requirements.

[OAC 3745-21-09(DD)(13)(d) and (g)]

- (13) The following equipment is excluded from the monitoring requirements of OAC 3745-21-09(DD)(2)(b):
- a. any pump that has no externally actuated shaft penetrating the pump housing and that is designated for no detectable emissions as provided in OAC 3745-21-09(DD)(7);
 - b. any pump that is equipped with a dual mechanical seal which has a barrier fluid system and sensor that comply with the requirements specified in OAC 3745-21-09(DD)(8);
 - c. any pump that is equipped with a closed vent system capable of capturing and transporting any leakage from the pump seal to control equipment, provided the closed vent system and the control equipment comply with the requirements specified in OAC 3745-21-09(DD)(9) and (DD)(10);

- d. any valve that has no externally actuated stem penetrating the valve and that is designated for “no detectable emissions” as provided in OAC 3745-21-09(DD)(7); and
- e. any valve that qualifies for the alternative monitoring standard based on the percentage of valves leaking, as provided in OAC 3745-21-09(DD)(13).

[OAC 3745-21-09(DD)(2)(d)]

- (14) Any pump “in light liquid service” shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, unless the pump is equipped with a closed vent system capable of transporting any leakage from the pump seal to control equipment, and the closed vent system and control equipment comply with the requirements specified in OAC 3745-21-09(DD)(9) and (DD)(10).

[OAC 3745-21-09(DD)(2)(e)]

- (15) Any sensor employed pursuant to OAC 3745-21-09(DD)(2)(d)(ii), for a pump equipped with a dual mechanical seal using a barrier fluid system and sensor; or a sensor employed pursuant to OAC 3745-21-09(DD)(3)(b), for a compressor equipped with a seal using a barrier fluid system and sensor; and complying with the requirements specified in OAC 3745-21-09(DD)(8), shall be checked daily, unless the sensor is equipped with an audible alarm.

[OAC 3745-21-09(DD)(2)(f)] for [OAC 3745-21-09(DD)(8)]

- (16) A leak is detected when:
- a. a concentration of 1,000 ppmv or greater is measured from a potential leak interface of any equipment, that is monitored for leaks using the method specified in OAC 3745-21-10(F);
 - b. there is an indication of liquids dripping from the seal of a pump “in light liquid service”; or
 - c. a sensor employed pursuant to OAC 3745-21-09(DD)(2)(d)(ii) or (DD)(3)(b) indicates failure of the seal system, the barrier fluid system, or both.

[OAC 3745-21-09(DD)(2)(g)]

- (17) When a leak is detected, the following information shall be recorded in the leak repair log:
- a. the identification number of the leaking equipment;
 - b. for each leak required to be monitored, the identification numbers of the leak detection instrument and its operator;
 - c. how the leak was detected, e.g., monitoring, visual inspection, odor detected, or sensor alarm/signal;

- d. the date on which the leak was detected and the date of each attempt to repair the leaking equipment;
- e. the methods of repair applied in each attempt to repair the leak;
- f. one of the following entries within 5 working days after each attempt to repair the leaking equipment:
 - i. “not monitored,” denoting the leaking equipment was presumed to still be leaking and it was not monitored; or
 - ii. if the leaking equipment was monitored with a leak detection instrument, the maximum concentration that was measured as follows:
 - (a) the actual reading in ppmv; or
 - (b) a record stating that the measured concentration was “below 10,000 ppmv”; or
 - (c) a record stating that the measured concentration was “above 10,000 ppmv”;
- g. if the leak is not repaired within 15 calendar days after the date on which it was detected:
 - i. a record stating that repair was delayed and the reason for the delay;
 - ii. if repair is being delayed until the next process unit shutdown due to technical infeasibility of repair, the signature of the operator whose decision it was that repair is technically infeasible without a process unit shutdown;
 - iii. the expected date of successful repair of the leak; and
 - iv. the dates of process unit shutdowns that occur while the leaking equipment is unrepaired; and
- h. the date on which the leak was successfully repaired.

[OAC 3745-21-09(DD)(2)(k)]

- (18) The leak repair log shall be kept in a readily accessible location and maintained by the operator of the process unit. Each record shall be retained in the log for a minimum of two years following the date on which it was recorded.

[OAC 3745-21-09(DD)(2)(l)]

- (19) The following information shall be recorded for the/each process unit in a log that is kept in a readily accessible location:
- a. a list of identification numbers for equipment subject to the requirements of OAC 3745-21-09(DD)(2) to (DD)(10);

- b. a list of identification numbers for equipment designated for “no detectable emissions” as provided in OAC 3745-21-09(DD)(7), and the signature of the permittee/operator authorizing the designation of each piece of equipment;
- c. a list of identification numbers for pressure relief devices subject to OAC 3745-21-09(DD)(4);
- d. a list of identification numbers for closed vent systems subject to OAC 3745-21-09(DD)(9);
- e. for compliance tests required under OAC 3745-21-09(DD)(4)(c), (DD)(7)(c), and (DD)(9)(c):
 - i. the date each compliance test is conducted;
 - ii. the background VOC emissions level measured during each compliance test; and
 - iii. the maximum instrument reading measured at the equipment during each compliance test;
- f. the following information pertaining to valves subject to an alternative monitoring schedule, as provided in OAC 3745-21-09(DD)(2)(c):
 - i. a list of identification numbers for valves designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve;
 - ii. a list of identification numbers for valves designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the schedule for monitoring each valve; and
 - iii. a list of identification numbers for valves subject to the alternative monitoring schedule based on a “skip period”, a schedule for monitoring these valves, and the percentage of valves leaking during each monitoring period;
- g. the following information pertaining to closed vent systems and control equipment meeting the requirements of OAC 3745-21-09(DD)(9) and (DD)(10):
 - i. detailed schematics, design specifications, and piping and instrumentation diagrams for the closed vent systems and collection and control equipment;
 - ii. the dates and descriptions of any changes in the design specifications above;
 - iii. a description of the parameter(s) monitored, as required in OAC 3745-21-09(DD)(10)(d), to ensure that the control equipment is operated and maintained in conformance with its design, and the reason for selecting the parameter(s);

- iv. periods when the closed vent systems and control equipment are not operated as designed, including periods when a flare pilot light does not have a flame; and
- v. dates of startups and shutdowns of the closed vent systems and control equipment;
- h. the following information pertaining to barrier fluid systems and sensors described in OAC 3745-21-09(DD)(8):
 - i. a list of identification numbers of pumps and compressors equipped with such barrier fluid systems and sensors;
 - ii. the criteria that indicate failure of the seal system, the barrier fluid system, or both, as required in OAC 3745-21-09(DD)(8)(d) and an explanation of the criteria; and
 - iii. any changes to such criteria and the reasons for the changes;
- i. the following information for use in determining an exemption for the process unit as provided in OAC 3745-21-09(DD)(17)(a):
 - i. an analysis demonstrating the design capacity of the process unit;
 - ii. a statement listing the feed and raw materials and products from the process unit and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohols; or
 - iii. an analysis demonstrating that equipment that is documented as “not in VOC service” meets this condition; and
- j. the following information pertaining to specific equipment that are exempt as provided in OAC 3745-21-09(DD)(17)(b):
 - i. a list of identification numbers of equipment “in vacuum service”;
 - ii. a list of identification numbers of equipment “not in VOC service” and the information or data used to demonstrate this; and
 - iii. a list of equipment subject to an equivalent emission requirement that is approved by the Director pursuant to OAC 3745-21-09 (DD)(16).

One recordkeeping system may be used to comply with the recordkeeping requirements for multiple process units provided the system identifies each process unit to which each record pertains.

[OAC 3745-21-09(DD)(14)(a) and (g)]

- (20) The following facility process units are exempted from the requirements of OAC 3745-21-09(DD)(2) to (DD)(6). Records shall be maintained to identify and document the process unit equipment meeting these requirements:

- a. any process unit that has a design capacity to produce less than 1,100 tons per year;
- b. any process unit that produces only heavy liquid chemicals from heavy liquid feed or raw materials;
- c. any process unit that produces beverage alcohol;
- d. any process unit that has no equipment "in VOC service" as determined in accordance with OAC 3745-21-10(O)(2); and
- e. any process unit at a petroleum refinery, as defined in OAC 3745-21-01(E)(15).

[OAC 3745-21-09(DD)(17)(a)]

- (21) The following process equipment are exempt from the requirements of OAC 3745-21-09(DD)(2) to (DD)(6). Records shall be maintained to identify and document the process unit equipment meeting these requirements:

- a. any equipment "not in VOC service", as determined in accordance with OAC 3745-21-10(O)(2);
- b. any equipment "in vacuum service"; and
- c. any equipment subject to an equivalent emission limitation as provided in OAC 3745-21-09(DD)(16).

[OAC 3745-21-09(DD)(17)(b)]

- (22) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified federally enforceable permit-to-install and operate (FEPTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new FEPTIO.

[ORC 3704.03(F)(3)(c) and F(4)]

e) 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 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) Semiannual reports shall be submitted to the Director by the first day of February and August and shall include the following information for each preceding semiannual period of operations:
- a. the process unit identification;
 - b. the number of pumps “in light liquid service” associated with the process unit, excluding:
 - i. pumps that have no externally actuated shaft penetrating the pump housing and designated for “no detectable emissions”; and
 - ii. pumps equipped with a closed vent system capable of capturing and transporting leakage from the pump seal to control equipment meeting the requirements of OAC 3745-21-09(DD)(9) and (DD)(10);
 - c. the number of valves “in gas/vapor service” or “in light liquid service” associated with the process unit, excluding:
 - i. valves that have no externally actuated stem penetrating the valve and designated for “no detectable emission”; and
 - ii. valves qualified for the alternative monitoring standard based on the percentage of valves leaking, under the provision of OAC 3745-21-09(DD)(13);
 - d. the number of compressors associated with the process unit, excluding:
 - i. compressors designated for and meeting the requirements for “no detectable emissions”;
 - ii. compressors equipped with a closed vent system capable of capturing and transporting leakage from the compressor seal to control equipment meeting the requirements of OAC 3745-21-09(DD)(9) and (DD)(10); and/or
 - iii. reciprocating compressors installed prior to 5/9/86, where it can be demonstrated that recasting or replacing the compressor would be the only means of complying with the requirement to equip it with a seal with a barrier fluid system and sensor;
 - e. for each month during the semiannual period:
 - i. the number of pumps “in light liquid service” for which leaks were detected (as required in this permit);
 - ii. the number of pumps “in light liquid service” for which leaks were not repaired within 15 calendar days after the date of leak detection;
 - iii. the number of valves “in gas/vapor service” or “in light liquid service” for which leaks were detected (as required in this permit);

- iv. the number of valves “in gas/vapor service” or “in light liquid service” for which leaks were not repaired within 15 calendar days after the date of leak detection;
 - v. the number of compressors for which leaks were detected (as required in this permit);
 - vi. the number of compressors for which leaks were not repaired within 15 calendar days after the date of leak detection; and
 - vii. for each delay of repair allowed pursuant to OAC 3745-21-09(DD)(11), the reason for the delay;
- f. the dates of process unit shutdowns that occurred within the semiannual period; and
 - g. the results of compliance tests for equipment identified as having “no detectable emissions”, along with the associated equipment identification numbers from the compliance log.

Semiannual reports shall be submitted to the appropriate Ohio EPA district office or local air agency by the first day of February and August and shall include information for the preceding semiannual period.

[OAC 3745-21-09(DD)(2)(m)] and [OAC 3745-21-09(DD)(15)(a), (c), and (d)]

- (4) 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. each period of time (start time and date, and end time and date) when the average temperature of the exhaust gases from the condenser was outside of the acceptable range; and/or
 - ii. 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 condenser;
 - 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).

[OAC rule 3745-15-03(B)(1)(b)] and [OAC rule 3745-15-03(C)]

- (5) The permittee shall notify the appropriate Ohio EPA district office or local air agency of the intent-to-test the process control equipment not less than 30 days before the proposed initiation of the testing. The following information shall be included in the notification
- a. a statement indicating the purpose of the proposed test and the applicable paragraph of OAC 3745-21-09 for which compliance will be demonstrated;
 - b. a detailed description of the process unit and control device to be tested;
 - c. a detailed description of the test procedures, equipment and sampling sites; and
 - d. a timetable, setting forth the dates on which:
 - i. the testing will be conducted; and
 - ii. the final test report will be submitted.

The results of such compliance tests shall be reported to the appropriate Ohio EPA district office or local air agency within 30 days following the test date.

[OAC 3745-21-10(A)(3) and (4)] and [OAC 3745-21-09(DD)(15)(a) and (b)]

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:

i. Emission Unit P006

1.1 lb/hr and 0.24 ton/yr of methanol

Applicable Compliance Method

Compliance with the hourly emission limitation has been demonstrated by the engineering analysis submitted with the permit application. Future compliance shall be determined based upon any revised engineering analysis established pursuant to the requirements of this permit and the records required pursuant to the Monitoring and Record Keeping Requirements in d).

Compliance with the annual emission limitation by multiplying the company derived emission factor for each type of batch by the number of batches produced and summing the different batches together using the equation below:

$$E_{Methanol} = \sum_{i=1}^n \left(\frac{\text{lb methanol}}{\text{batch}} \right)_i \times \left(\frac{\text{number of batches}}{\text{year}} \right)_i \times \left(\frac{1 \text{ ton}}{2000 \text{ lbs}} \right)$$

$E_{Methanol}$ = the emissions from a batch in ton/yr;

i = an individual batch; and

n = the total number of individual batches

ii. Emission Unit P013

0.22 lb/hr and 0.12 ton/yr of methanol

Applicable Compliance Method

Compliance with the hourly emission limitation has been demonstrated by the engineering analysis submitted with the permit application. Future compliance shall be determined based upon any revised engineering analysis established pursuant to the requirements of this permit and the records required pursuant to the Monitoring and Record Keeping Requirements in d).

Compliance with the annual emission limitation by multiplying the company derived emission factor for each type of batch by the number of batches produced and summing the different batches together using the equation below:

$$E_{Methanol} = \sum_{i=1}^n \left(\frac{\text{lb methanol}}{\text{batch}} \right)_i \times \left(\frac{\text{number of batches}}{\text{year}} \right)_i \times \left(\frac{1 \text{ ton}}{2000 \text{ lbs}} \right)$$

$E_{Methanol}$ = the emissions from a batch in ton/yr;

i = an individual batch; and

n = the total number of individual batches

b. Emission Limitation:

i. Emission Unit P006

0.35 lb/hr and 0.28 ton/yr of toluene

Applicable Compliance Method

Compliance with the hourly emission limitation has been demonstrated by the engineering analysis submitted with the permit application. Future

compliance shall be determined based upon any revised engineering analysis established pursuant to the requirements of this permit and the records required pursuant to the Monitoring and Record Keeping Requirements in d).

Compliance with the annual emission limitation by multiplying the company derived emission factor for each type of batch by the number of batches produced and summing the different batches together using the equation below:

$$E_{Toluene} = \sum_{i=1}^n \left(\frac{\text{lb toluene}}{\text{batch}} \right)_i \times \left(\frac{\text{number of batches}}{\text{year}} \right)_i \times \left(\frac{1 \text{ ton}}{2000 \text{ lbs}} \right)$$

$E_{Toluene}$ = the emissions from a batch in ton/yr;

i = an individual batch; and

n = the total number of individual batches

ii. Emission Unit P013

0.35 lb/hr and 0.28 ton/yr of toluene

Applicable Compliance Method

Compliance with the hourly emission limitation has been demonstrated by the engineering analysis submitted with the permit application. Future compliance shall be determined based upon any revised engineering analysis established pursuant to the requirements of this permit and the records required pursuant to the Monitoring and Record Keeping Requirements in d).

Compliance with the annual emission limitation by multiplying the company derived emission factor for each type of batch by the number of batches produced and summing the different batches together using the equation below:

$$E_{Toluene} = \sum_{i=1}^n \left(\frac{\text{lb toluene}}{\text{batch}} \right)_i \times \left(\frac{\text{number of batches}}{\text{year}} \right)_i \times \left(\frac{1 \text{ ton}}{2000 \text{ lbs}} \right)$$

$E_{Toluene}$ = the emissions from a batch in ton/yr;

i = an individual batch; and

n = the total number of individual batches

c. Emission Limitation:

i. Emission Unit P006

1.1 lb/hr and 0.57 ton/yr of volatile organic compounds (VOC)

Applicable Compliance Method

Compliance with the hourly emission limitation has been demonstrated by the engineering analysis submitted with the permit application. Future compliance shall be determined based upon any revised engineering analysis established pursuant to the requirements of this permit and the records required pursuant to the Monitoring and Record Keeping Requirements in d).

Compliance with the annual emission limitation by multiplying the company derived emission factor for each type of batch by the number of batches produced and summing the different batches together using the equation below:

$$E_{VOC} = \sum_{i=1}^n \left(\frac{\text{lb VOC}}{\text{batch}} \right)_i \times \left(\frac{\text{number of batches}}{\text{year}} \right)_i \times \left(\frac{1 \text{ ton}}{2000 \text{ lbs}} \right)$$

E_{VOC} = the emissions from a batch in ton/yr;
i = an individual batch; and

n = the total number of individual batches

ii. Emission Unit P013

2.16 lb/hr and 0.28 ton/yr of volatile organic compounds (VOC)

Applicable Compliance Method

Compliance with the hourly emission limitation has been demonstrated by the engineering analysis submitted with the permit application. Future compliance shall be determined based upon any revised engineering analysis established pursuant to the requirements of this permit and the records required pursuant to the Monitoring and Record Keeping Requirements in d).

Compliance with the annual emission limitation by multiplying the company derived emission factor for each type of batch by the number of batches produced and summing the different batches together using the equation below:

$$E_{VOC} = \sum_{i=1}^n \left(\frac{\text{lb VOC}}{\text{batch}} \right)_i \times \left(\frac{\text{number of batches}}{\text{year}} \right)_i \times \left(\frac{1 \text{ ton}}{2000 \text{ lbs}} \right)$$



E_{VOC} = the emissions from a batch in ton/yr;
i = an individual batch; and

n = the total number of individual batches.

g) Miscellaneous Requirements

- (1) None.