



John R. Kasich, Governor
 Mary Taylor, Lt. Governor
 Craig W. Butler, Director

Certified Mail

4/26/2016

Stewart Grove, III
 Cincinnati Renewable Fuels, LLC
 4700 Este Avenue
 Cincinnati, OH 45232

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1431074118
 Permit Number: P0119901
 Permit Type: Initial Installation
 County: Hamilton

Dear Permit Holder:

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

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**
- **What should you do if you notice a spill or environmental emergency?**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

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

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

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

What should you do if you notice a spill or environmental emergency?

Any spill or environmental emergency which may endanger human health or the environment should be reported to the Emergency Response 24-HOUR EMERGENCY SPILL HOTLINE toll-free at (800) 282-9378. Report non-emergency complaints to the appropriate district office or local air agency.

If you have any questions regarding your permit, please contact Southwest Ohio Air Quality Agency at (513)946-7777 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: SWOQA



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Cincinnati Renewable Fuels, LLC**

Facility ID:	1431074118
Permit Number:	P0119901
Permit Type:	Initial Installation
Issued:	4/26/2016
Effective:	4/26/2016
Expiration:	10/11/2017



Division of Air Pollution Control
Permit-to-Install and Operate
for
Cincinnati Renewable Fuels, LLC

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Final Permit-to-Install and Operate
Cincinnati Renewable Fuels, LLC
Permit Number: P0119901
Facility ID: 1431074118
Effective Date: 4/26/2016

Authorization

Facility ID: 1431074118
Application Number(s): A0054720
Permit Number: P0119901
Permit Description: Initial PTIO for facility equipment leaks (P801) and a waste water process (P012).
Permit Type: Initial Installation
Permit Fee: \$1,200.00
Issue Date: 4/26/2016
Effective Date: 4/26/2016
Expiration Date: 10/11/2017
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Cincinnati Renewable Fuels, LLC
4700 Este Avenue
Cincinnati, OH 45232

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

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

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

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Director



Final Permit-to-Install and Operate
Cincinnati Renewable Fuels, LLC
Permit Number: P0119901
Facility ID: 1431074118
Effective Date: 4/26/2016

Authorization (continued)

Permit Number: P0119901

Permit Description: Initial PTIO for facility equipment leaks (P801) and a waste water process (P012).

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

Emissions Unit ID:	P012
Company Equipment ID:	Wastewater Treatment Process (P011)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P801
Company Equipment ID:	Fugitive Equipment Leaks (P801)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
Cincinnati Renewable Fuels, LLC
Permit Number: P0119901
Facility ID: 1431074118
Effective Date: 4/26/2016

A. Standard Terms and Conditions

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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

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

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

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

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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



Final Permit-to-Install and Operate
Cincinnati Renewable Fuels, LLC
Permit Number: P0119901
Facility ID: 1431074118
Effective Date: 4/26/2016

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) 2.,3.,4. and 5.
2. The actual emissions from P004 (Biodiesel Manufacturing Process), J001 (Methanol Loadout), P012 (Wastewater Treatment Process), P801 (Fugitive Equipment Leaks), and future to-be-installed air contaminant sources, combined, shall not exceed 6.57 TPY for methanol. Compliance with the above limitations shall be based on a rolling 12-month summation.
3. The permittee shall collect and record the following information each month for the emissions units identified in 2.:
 - a) The methanol emissions in pounds or tons per month;
 - b) The updated rolling, 12-month summation for methanol emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
4. The permittee shall submit quarterly deviation (excursion) reports for any emissions unit that applies methanol-containing materials listed in B.2 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:
 - (1) any exceedance of the methanol emission limitations outlined in 2.
 - 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



Final Permit-to-Install and Operate
Cincinnati Renewable Fuels, LLC
Permit Number: P0119901
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Effective Date: 4/26/2016

schedule has been established and approved by the Director (the appropriate District Office or local air agency).

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.

5. Emission Limitation:

Methanol emissions shall not exceed 6.57 TPY based on a rolling, 12-month summation for the emissions units listed in 2.

Applicable Compliance Method:

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



Final Permit-to-Install and Operate
Cincinnati Renewable Fuels, LLC
Permit Number: P0119901
Facility ID: 1431074118
Effective Date: 4/26/2016

C. Emissions Unit Terms and Conditions

1. P012, Wastewater Treatment Process

Operations, Property and/or Equipment Description:

Wastewater treatment system consisting of a stormwater tank, a fat trap, and an attenuation tank.

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

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

a. None.

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

a. b)(1)d.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) June 30, 2008	Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 1.35 tons per year. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	See b)(2)b.
c.	OAC rule 3745-21-07(M)	See b)(2)c.
d.	OAC rule 3745-31-05(D)	See B.2.
e.	OAC rule 3745-21-16	Not subject. See b)(2)d.

(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 uncontrolled volatile organic compound (VOC) emissions from this air contaminant source since the potential to emit for VOC is less than 10 tons per year.

- c. The requirements of OAC rule 3745-21-07(M) are not applicable because there is no control device for this emissions unit.
- d. The facility has a potential to emit for VOC emissions less than 100 TPY. Therefore, P012 is not regulated under this rule.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) None.

e) Reporting Requirements

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

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- f) Testing Requirements
- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emissions Limitation:

Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 1.35 tons per year.

Applicable Compliance Method:

Compliance with the tons per year VOC emissions limitations in b)(1) shall be demonstrated by calculations using TOXCHEM or equivalent and the permittee provided wastewater treatment process design and operating parameter data contained in PTIO application number A0054720, as submitted on November 12, 2015.
- g) Miscellaneous Requirements
- (1) None.

2. P801, Fugitive Equipment Leaks

Operations, Property and/or Equipment Description:

Fugitive emissions from equipment leak components in the biodiesel manufacturing process unit.

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

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

a. None.

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

a. b)(1)c. through b)(1)q., b)(2)c., b)(2)d., and c)(1) through c)(5).

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) June 30, 2008	<p>Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 6.37 tons per year.</p> <p>The permittee shall comply with the applicable leak monitoring and repair requirements of 40 CFR 60, Subpart VVa and OAC rule 3745-21-09(DD) and the practices and procedures implemented at the facility to identify leaks.</p> <p>See b)(2)a.</p>
b.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	See b)(2)b.
c.	OAC rule 3745-31-05(D)	See B.2.
d.	40 CFR Part 60 Subpart A	See b)(2)d.
e.	40 CFR Part 60 Subpart VVa	See b)(2)e.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry (SOCMI) for which construction, reconstruction, or modification commenced after 11/7/06.	
f.	40 CFR 60.482-2a	Equipment leak standards for pumps in light liquid service
g.	40 CFR 60.482-3a	Equipment leak standards for compressors.
h.	40 CFR 60.482-4a	Equipment leak standards for pressure relief devices in gas/vapor service
i.	40 CFR 60.482-5a	Equipment leak standards for sampling connection systems
j.	40 CFR 60.482-6a	Equipment leak standards for open-ended valves or lines
k.	40 CFR 60.482-7a	Equipment leak standards for valves in gas/vapor service and in light liquid service
l.	40 CFR 60.482-8a	Equipment leak standards for pumps, valves, and connectors in heavy liquid service; and pressure relief devices in light liquid or heavy liquid service
m.	40 CFR 60.482-9a	Standards for delay of repair of equipment leaks
n.	40 CFR 60.482-10a	Standards for closed vent systems and control devices.
o.	40 CFR 60.482-11a	Standards for connectors in gas/valves service and in light liquid service
p.	40 CFR 60.483-1a	Alternative standards for valves, via percentage of valves leaking ($\leq 2\%$)
q.	40 CFR 60.483-2a	Alternative standards for valves, via skip period leak detection and repair

(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)(1)a.

- 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 uncontrolled volatile organic compound (VOC) emissions from this air contaminant source since the potential to emit for VOC is less than 10 tons per year.

- c. 40 CFR Part 60 subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60. Per 40 CFR 60.486a(k), the provisions of 40 CFR 60.7(b) and (d) do not apply to this emissions unit.
- d. The permittee shall comply with all applicable requirements of 40 CFR Part 60, Subpart VVa. The provisions of 40 CFR Part 60 Subpart VVa apply to affected facilities in the synthetic organic chemicals manufacturing industry as defined under 40 CFR 60.481a. The process unit for production of glycerin is subject to the requirements of this rule. For purposes of this rule, the process unit also includes raw material, intermediate product and final product storage tanks.

c) Operational Restrictions

- (1) Each compressor that is not equipped with a closed vent system capable of capturing and transporting any leakage from the drive shaft to a process, fuel gas system, or control device shall be equipped with a barrier fluid system to prevent VOC leakage to the atmosphere. Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal and barrier fluid system; and the sensor shall be equipped with an audible alarm if it cannot be checked daily.
- (2) Except during pressure releases, each pressure relief device shall be operated with “no detectable emissions”, as indicated by an instrument reading of less than 500 ppm above background, as measured by Method 21 in 40 CFR 60 Appendix A and in accordance with 40 CFR 60.485(c). A pressure relief device shall be returned to a condition of “no detectable emissions” as soon as practicable following a pressure release, but no later than 5 days after the 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 a control device, the pipeline, process heater, or flare is excluded from these requirements.
- (3) A first attempt at repair of a leak shall be made no later than 5 days after each leak is detected. The leak shall be repaired as soon as practicable, but, with the exception of a pressure relief device (requiring repair within 5 days of release), not later than 15 days

after it is detected unless meeting the requirements of 40 CFR 60.482-9, for delay of repair.

- (4) Each open ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve which shall seal the open end at all times, except during operations requiring process fluid flow. If equipped with a second valve, the valve on the process fluid end shall be closed before the second valve is closed. Where a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves, but shall seal the open end at all other times.

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

- (1) A leak detection and repair program for equipment in the process unit shall be developed and implemented in accordance with the following requirements. Process units which produce glycerin are required to comply with these requirements.

- a. A leak detection and repair program for equipment in the process unit shall be developed and implemented in accordance with the requirements specified in d)(1)b. to d)(1)l. and e)(1).

- b. Except as otherwise provided in d)(1)c. and d)(1)d., equipment shall be monitored for leaks in accordance with the method specified in paragraph (F) of rule 3745-21-10 of the Administrative Code, as follows:

- i. Any pump in light liquid service shall be monitored monthly.

For purposes of OAC rule 3745-21-09(DD), "in light liquid service" means that the piece of equipment contains or contacts process fluid that meets all of the following conditions:

- (a) The process fluid is a liquid at operating conditions.

- (b) The vapor pressure of one or more of the pure components within the process fluid is greater than 0.04 pound per square inch at sixty-eight degrees Fahrenheit. Vapor pressures may be obtained from standard reference texts or may be determined by the method in ASTM D2879-70.

- (c) The total concentration of the pure components having a vapor pressure greater than 0.04 pound per square inch at sixty-eight degrees Fahrenheit is equal to or greater than twenty per cent by weight.

- ii. Any valve in gas/vapor service or in light liquid service shall be monitored monthly, except that quarterly monitoring may be employed any time after no leaks are detected during two consecutive months. The quarterly monitoring shall begin with the next calendar quarter following the two consecutive months of no detected leaks and shall be conducted in the first month of each calendar quarter. The quarterly monitoring may

continue until a leak is detected, at which time monthly monitoring shall be employed again.

For purposes of OAC rule 3745-21-09(DD), "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.

- iii. Any of the following equipment shall be monitored within five calendar days after evidence of a leak or potential leak from the equipment by visual, audible, olfactory, or other detection method:
 - (a) Any pump in heavy liquid service;
 - (b) Any valve in heavy liquid service;
 - (c) Any pressure relief device in light liquid service or in heavy liquid service; and
 - (d) Any flange or other connector.

For purposes of OAC rule 3745-21-09(DD), "in heavy liquid service" means that the piece of equipment is not in gas/vapor service or in light liquid service.

- iv. Any equipment in which a leak is detected as described in d)(1)g. shall be monitored within five working days after each attempt to repair, unless the permittee believes that the equipment was not successfully repaired.
- c. 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 d)(1)b.ii. as follows:
 - i. The valve is designated as unsafe to monitor and is monitored as frequently as practical during safe to monitor times, provided the following conditions are met:
 - (a) The permittee of the valve 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.
 - (b) The permittee of the valve adheres to a written plan that requires monitoring of the valve as frequently as practical during safe to monitor times.
 - ii. The valve is subject to an alternative monitoring schedule based on a skip period as specified in d)(11).
- d. Excluded from the monitoring requirements of d)(1)b. are the following equipment:

- i. Any pump that has no externally actuated shaft penetrating the pump housing and that is designated for no detectable emissions as provided in d)(6);
 - ii. 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 d)(7);
 - iii. 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 d)(8) and d)(9);
 - iv. Any valve that has no externally actuated stem penetrating the valve and that is designated for no detectable emissions as provided in d)(6); and
 - v. Any valve that is subject to the alternative monitoring standard for valves based on the percentage of valves leaking as provided in d)(11).
- e. 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 paragraphs d)(8) and d)(9).
- f. Any sensor employed pursuant to d)(1)d.ii or d)(2) shall be checked daily, unless the sensor is equipped with an audible alarm.
- g. A leak is detected:
- i. When a concentration of ten thousand ppmv or greater is measured from a potential leak interface of any equipment that is monitored for leaks using the method in OAC rule 3745-21-10(F);
 - ii. When there is an indication of liquids dripping from the seal of a pump in light liquid service; or
 - iii. When a sensor employed pursuant to d)(1)d.ii or d)(2) indicates failure of the seal system, the barrier fluid system, or both.
- h. When a leak is detected as described in d)(1)g., the following procedures shall be followed:
- i. A weatherproof and readily visible identification tag, marked with the equipment identification number, is immediately attached to the leaking equipment.
 - ii. A record of the leak and any attempt to repair the leak is entered into the leak repair log kept pursuant to d)(1)k.

- iii. The identification tag attached to the leaking equipment, other than a valve that is monitored pursuant to d)(1)b.ii., may be removed after the leaking equipment is repaired.
- iv. The identification tag attached to a leaking valve that is monitored pursuant to d)(1)b.ii. may be removed after the leaking valve is repaired, monitored for leaks for two consecutive months as specified in d)(1)b.ii., and found to have no detected leaks during those two consecutive months.
- i. When a leak is detected as described in d)(1)g., the leaking equipment shall be repaired as soon as practicable, but no later than fifteen calendar days after the leak is detected, except for a delay of repair as provided in d)(10). Leaking equipment shall be deemed repaired if the maximum concentration measured pursuant to d)(1)b.iv. is less than ten thousand ppmv.
- j. When a leak is detected as described in d)(1)g., a first attempt at repair shall be made no later than five calendar days after the leak is detected; and the first attempts at repair shall include, but are not limited to, the following best practices where practicable:
 - i. Tightening of bonnet bolts;
 - ii. Replacement of bonnet bolts;
 - iii. Tightening of packing gland nuts; and
 - iv. Injection of lubricant into lubricated packing.
- k. When a leak is detected as described in d)(1)g., the following information shall be recorded in a leak repair log:
 - i. The identification number of the leaking equipment and, for leaks based on monitoring, the identification numbers of the leak detection instrument and its operator;
 - ii. The basis for the detection of the leak; for example, monitoring, visual inspection, or sensor;
 - iii. The date on which the leak was detected and the date of each attempt to repair the leaking equipment;
 - iv. The methods of repair applied in each attempt to repair the leaking equipment;
 - v. One of the following entries within five working days after each attempt to repair the leaking equipment:
 - (a) “Not monitored,” denoting the leaking equipment was presumed to still be leaking and it was not monitored; or

- (b) If the leaking equipment was monitored with a leak detection instrument, the maximum concentration that was measured as follows:
 - (i) The actual reading in ppmv; or
 - (ii) "Below 10,000," denoting less than ten thousand ppmv; or
 - (iii) "Above 10,000," denoting not less than ten thousand ppmv;
 - vi. If the leak is not repaired within fifteen calendar days after the date on which it was detected:
 - (a) "Repair delayed" and the reason for the delay;
 - (b) If repair is being delayed until the next process unit shutdown due to technical infeasibility of repair, the signature of the permittee whose decision it was that repair is technically infeasible without a process unit shutdown;
 - (c) The expected date of successful repair of the leak;
 - (d) The dates of process unit shutdowns that occur while the leaking equipment is unrepaired; and
 - vii. The date on which the leak was successfully repaired.
 - I. The leak repair log shall be retained by the permittee of the process unit in a readily accessible location for a minimum of two years after the date on which the record was made.
- (2) Any compressor required to comply with OAC rule 3745-21-09(DD) shall be equipped with a seal that has a barrier fluid system and sensor which comply with the requirements specified in d)(7).
- a. Excluded from the requirements of d)(2) is any compressor that is designated for no detectable emissions as provided in d)(6).
 - b. Excluded from the requirements of d)(2) is any compressor that is equipped with a closed vent system capable of capturing and transporting any leakage from the compressor seal to control equipment, provided the closed vent system and the control equipment comply with the requirements specified in d)(8) and d)(9).
- (3) Any pressure relief device in gas/vapor service required to comply with OAC rule 3745-21-09(DD) shall, except during pressure releases, be operated with no detectable emissions, as indicated by an instrument reading of less than five hundred ppmv above background, as measured by the method specified in OAC rule 3745-21-10(F).
- a. After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions as soon as practicable, but no later than five

calendar days after the pressure release, except for a delay of repair as provided in d)(10).

- b. No later than five calendar days after a pressure release, the pressure relief device shall be tested to confirm the condition of no detectable emissions in accordance with the method specified in OAC rule 3745-21-10(F).
 - c. Excluded from the requirements of paragraph d)(3) and d)(3)b. is 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, provided the closed vent system and control equipment comply with the requirements specified in d)(8) and d)(9).
- (4) Any sampling connection system required to comply with OAC rule 3745-21-09(DD) 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 requirements specified in d)(9).

Excluded from the requirements of d)(4) is any sampling connection system that is an in-situ sampling system.

- (5) Any open-ended valve or line required to comply with OAC rule 3745-21-09(DD) shall be equipped with a cap, blind flange, plug, or second valve and shall comply with the following requirements.
- a. 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.
 - b. 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.
 - c. If a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves, but shall comply with d)(5)b. at all other times.
- (6) Any equipment (pump, valve, or compressor) designated for no detectable emissions pursuant to d)(1)d.i., d)(1)d.iv. or d)(2)a. shall comply with the following requirements.

- a. The equipment shall be operated with no detectable emissions as indicated by an instrument reading of less than five hundred ppmv above background as measured by OAC rule 3745-21-10(F).
 - b. The equipment shall be tested for compliance with d)(6)a. initially upon designation and annually.
 - c. The designation of the equipment shall be signed by the permittee of the equipment in the log kept pursuant to d)(13)a.
- (7) Barrier fluid systems and sensors for pumps and compressors
- a. When a pump or compressor is equipped with a seal that has a barrier fluid system and sensor which are employed to meet the requirements of d)(1)d.ii., or d)(2), the requirements of d)(7)b. to d. shall be met.
 - b. The barrier fluid system shall meet one of the following conditions:
 - i. The barrier fluid system is operated with a barrier fluid at a pressure that is at all times greater 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 d)(8) and d)(9).
 - 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.
 - c. The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.
 - d. 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 criteria determined by the permittee from design considerations and operating experience.
- (8) Any closed vent system that is used to comply with the requirements of d)(1)d.iii., d)(2)b., d)(3)c., d)(4)c., d)(7)b.ii., or d)(10)c.ii. shall comply with the following requirements.
- a. The closed vent system shall be designed and operated with no detectable emissions, as indicated by an instrument reading of less than five hundred ppmv above background, as measured by the method specified in OAC rule 3745-21-10(F).
 - b. The closed vent system shall be tested for compliance with d)(8)a. initially and annually.
 - c. The closed vent system shall be operated at all times when emissions may be vented to it.

- (9) Any control equipment that is used to comply with the requirements of d)(1)d.iii., d)(2)b., d)(3)c., or d)(7)b.ii. shall comply with the following requirements.
- a. If the control equipment is a vapor recovery system, it shall be designed and operated to recover VOC emissions vented to it with an efficiency of at least ninety-five per cent by weight.
 - b. If the control equipment is an enclosed combustion device, it shall be designed and operated to reduce the VOC emissions vented to it with an efficiency of at least ninety-five per cent by weight, or to provide a minimum residence time of 0.75 second at a minimum temperature of fifteen hundred degrees Fahrenheit.
 - c. The permittee of the control equipment shall monitor the control equipment to ensure that it is operated and maintained in conformance with its design.
 - d. The control equipment shall be operated at all times when emissions may be vented to it.
- (10) A delay of repair that is employed pursuant to d)(1)i. or d)(3)a. shall be allowed only as provided in the following paragraphs.
- a. A delay of repair shall be allowed if the repair is technically infeasible without a process unit shutdown. 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. The permittee demonstrates that the emission of purged material resulting from immediate repair is greater than the emission likely to result from delay of repair; and
 - ii. When repair procedures are effected, the purged material is collected and destroyed or recovered in control equipment that meets the requirements specified in d)(9).
 - d. 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 six months after the leak was detected.
 - e. A delay of repair beyond a process unit shutdown shall be allowed for a valve if a valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and 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 that valve unless the next process unit shutdown occurs sooner than six months after the first process unit shutdown.

- (11) The permittee may elect to implement an alternative monitoring schedule in lieu of the monitoring requirements specified in d)(1)b.ii., as provided in d)(1)d.v. The alternative monitoring schedule shall be based on skipping quarterly monitoring periods provided the percentage of valves leaking is no more than 2.0. If the permittee elects to implement an alternative monitoring schedule, then the permittee shall comply with the requirements specified in the following paragraphs.
- a. The permittee shall notify the Southwest Ohio Air Quality Agency prior to implementing this alternative monitoring schedule. Such notification must identify which valves will be subject to this alternative monitoring schedule and which work practice within d)(11)d. will be implemented. Any valve in vacuum service, in heavy liquid service, or not in VOC service, shall be excluded from this alternative monitoring schedule.
 - b. Any valve subject to this alternative monitoring schedule shall comply initially with the monitoring requirements specified in d)(1)b.ii.
 - c. Any valve subject to this alternative monitoring schedule shall continue to be subject to the requirements specified in d)(1)g. to d)(1)l. and e)(1).
 - d. One of the following two alternative work practices for skipping monitoring periods may be implemented:
 - i. After two consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2.0, a monitoring program may begin in which the first quarter of every two consecutive quarterly leak detection periods is skipped.
 - ii. After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2.0, a monitoring program may begin in which the first three quarters of every four consecutive quarterly periods is skipped.
 - e. If the percentage of valves leaking is greater than 2.0, the permittee shall comply with the monitoring requirements as specified in d)(1)b.ii., but may again elect to use this alternative monitoring schedule.
 - f. The percentage of valves leaking shall be determined for the valves subject to this alternative monitoring schedule 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 one hundred.

- g. The following information pertaining to valves subject to this alternative monitoring schedule shall be recorded in a log that is kept in a readily accessible location:
 - i. A schedule of monitoring; and
 - ii. The percentage of valves leaking during each monitoring period.
- (12) The permittee may elect to implement an alternative monitoring standard in lieu of the monitoring requirements specified in, d)(1)b.ii., as provided in d)(1)d.v. The alternative monitoring standard shall be based on maintaining the percentage of valves leaking at 2.0 or less. Any permittee who elects to implement an alternative monitoring standard shall comply with the following requirements.
- a. The permittee shall notify the Southwest Ohio Air Quality Agency prior to implementing this alternative monitoring standard.
 - b. 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 those valves which are designated as unsafe to monitor as provided in paragraph d)(1)c.i., those valves not in VOC service, and those valves in vacuum service.
 - c. The percentage of valves leaking, as determined in accordance with d)(12)e., shall not exceed 2.0. If the percentage of valves leaking is greater than 2.0, the permittee shall comply with the monitoring requirements as specified in d)(1)b.ii., but may again elect to use this alternative monitoring standard.
 - d. All valves subject to this alternative monitoring standard shall be tested for compliance with d)(12)c. initially upon implementation and annually.
 - e. A compliance test shall be conducted in the following manner:
 - i. All valves subject to this alternative monitoring standard shall be monitored for leaks within a one-week period by the method specified in OAC rule 3745-21-10(F).
 - ii. If an instrument reading of ten thousand ppmv or greater is measured, a leak is detected.
 - 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 one hundred.
 - f. When a leak is detected as described in d)(12)e.ii., the leaking valve shall be repaired in accordance d)(1)h. and d)(1)i.
- (13) The permittee shall comply with the following recordkeeping requirements. The permittee may use one recordkeeping system for more than one process unit to comply with the recordkeeping requirements, provided the system identifies each record by each process unit.

- a. The following information shall be recorded in a log that is kept in a readily accessible location:
 - i. A list of identification numbers for equipment subject to the requirements of d)(1) through d)(9);
 - ii. A list of identification numbers for equipment designated for no detectable emissions as provided in d)(6), and a signature of the permittee authorizing such designation;
 - iii. A list of identification numbers for pressure relief devices subject to d)(3);
 - iv. A list of identification numbers for closed vent systems subject to d)(8); and
 - v. For compliance tests required under paragraphs d)(3)b., d)(6)b., and d)(8)b.:
 - (a) The date of each compliance test;
 - (b) The background level measured during each compliance test; and
 - (c) The maximum instrument reading measured at the equipment during each compliance test.
- b. The following information pertaining to valves subject to an alternative monitoring schedule, as provided in d)(1)c., shall be recorded in a log that is kept in a readily accessible location:
 - 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 subject to the alternative monitoring schedule based on a skip period, a schedule for monitoring, and the percentage of valves leaking during each monitoring period.
- c. The following information pertaining to closed vent systems and control equipment described in d)(8) and d)(9) shall be recorded and kept in a readily accessible location:
 - i. Detailed schematics, design specifications, and piping and instrumentation diagrams;
 - ii. The dates and descriptions of any changes in the design specifications;
 - iii. 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

- iv. Dates of startups and shutdowns of the closed vent systems and control equipment.
 - d. The following information pertaining to barrier fluid systems and sensors described in d)(7) shall be recorded in a log that is kept in a readily accessible location:
 - 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 d)(7)d. and an explanation of the criteria; and
 - iii. Any changes to such criteria and the reasons for the changes.
 - e. The following information for use in determining an exemption for the process unit as provided in d)(15) shall be recorded in a log that is kept in a readily accessible location:
 - i. 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
 - ii. An analysis demonstrating that no equipment is in VOC service.
 - f. The following information pertaining to specific equipment that are exempt as provided in d)(14) shall be recorded in a log that is kept in a readily accessible location:
 - i. A list of identification numbers of equipment in vacuum service; and
 - ii. A list of identification numbers of equipment not in VOC service and the information or data used to demonstrate that the equipment is not in VOC service.
- (14) Exempted from the requirements of d)(1) are the following equipment:
- a. Any equipment not in VOC service, as determined in accordance with paragraph (O)(2) of rule 3745-21-10 of the Administrative Code; and

For purposes of OAC rule 3745-21-09(DD), "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.
 - b. Any equipment in vacuum service (operating at an internal pressure that is at least 0.7 pound per square inch below ambient pressure).
- (15) Exempted from the requirements of d)(1) are the following process units:

- a. Any process unit that produces only heavy liquid chemicals from heavy liquid feed or raw materials;

 "In heavy liquid service" means that the piece of equipment is not in gas/vapor service or in light liquid service.
- b. Any process unit that has no equipment in VOC service as determined in accordance with paragraph (O)(2) of rule 3745-21-10 of the Administrative Code.

(16) [40 CFR 60, Subpart VVa] NSPS FOR EQUIPMENT LEAKS OF VOC IN THE SYNTHETIC ORGANIC CHEMICALS MANUFACTURING INDUSTRY

The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 60, Subpart VVa, including the following sections briefly summarized:

a.	60.482-1a(b)	<i>Standards-General:</i> Compliance is determined by review of records, reports, review of performance test results and inspections.
b.	60.482-1a(c)	Equivalence of means of emissions limitation.
c.	60.482-1a(d)	Equipment in vacuum service exemption
d.	60.482-1a(e)	Exemption for equipment in service less than 300 hrs/yr.
e.	60.482-1a(f)	Alternate frequency for batch process units.
f.	60.482-1a(g)	Assignments for storage vessels shared with multiple units.
g.	60.482-2a(a), (b) and (c)	<i>Standards-Pumps in Light Liquid Service:</i> Visually check pumps weekly for indications of leaks. Monitor pumps monthly according to Method 21 for leaks of 10,000 ppm or greater. First attempt at repair shall be made within 5 days and repaired no later than 15 days. If indications of liquids dripping from pump, monitor according to Method 21 within 5 days or designate as a leak. Defines first attempt at repair.
h.	60.482-2a(d) through (h)	Exemptions for certain types of pumps meeting specific requirements.
i.	60.482-3(a) through (g)	<i>Standards-Compressors:</i> Each compressor shall be equipped with a seal system that includes a barrier fluid system. Each barrier fluid system (see 60.482-3(b)&(c)) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid or both, checked daily or equipped with an audible alarm. Determine criterion that indicates failure of the seal system, barrier fluid, or both. If sensor indicates failure of the seal system, barrier system or both,

		a leak is detected.
k.	60.482-3a(h), (i) and (j)	<i>Standards-Compressors:</i> Exemptions for certain types of compressors meeting specific requirements.
l.	60.482-4a(a) and (b)	<i>Standards-Pressure Relief Devices in Gas/Vapor Service:</i> They shall be operated with no detectable emissions (<500 ppm above background). Within 5 days after a pressure release, the device must be monitored to confirm conditions of no detectable emissions.
m.	60.482-4a(c) and (d)	<i>Standards-Pressure Relief Devices in Gas/Vapor Service:</i> Exemptions for certain types of pressure relief devices meeting specific requirements. Requirements for rupture disks.
n.	60.482-5a(a) through (c)	<i>Standards-Sampling Connection Systems:</i> each sampling connection system shall be equipped with a closed- purged, closed-loop or closed-vent system and shall comply with the requirements of 60.482-5a(b). In situ sampling systems and sampling systems without purges are exempt from the above.
o.	60.482-6a(a) through (e)	<i>Standards-Open-Ended Valves or Lines</i>
p.	60.482-7a(a) through (h)	<i>Standards-Valves in Gas/Vapor Service in Light Liquid Service:</i> Valves are monitored monthly to detect leaks (>500 ppm). First attempt at repair shall be made within 5 days and repaired no later than 15 days. If a leak is detected, the valve is monitored monthly until a leak is not detected for 2 successive months. See 60.482-7(f)-(h) for information regarding valves with no detectable emissions, unsafe-to-monitor or difficult-to-monitor valves.
q.	60.482-8a(a) through (d)	<i>Standards-Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Connectors:</i> Evidence of a leak is found by visual, audible, olfactory or other detection methods. If leaking the equipment shall be monitored within 5 days using Method 21 for leaks (>10,000 ppm). First attempt at repair shall be made within 5 days and repaired no later than 15 days.
r.	60.482-9a(a) through (f)	<i>Standards-Delay of Repair:</i> Delay of repair of equipment with leaks is allowed if repair within 15 days is infeasible without a process shutdown. Requirements for delay of repair of equipment not in VOC service; valves; pumps and beyond a process unit shutdown.

s.	60.482-10a(a) through (h) and (m)	<i>Standards-Closed Vent Systems and Control Devices:</i> Vapor recovery systems shall have a VOC recovery efficiency of 95% or greater, or to an exit concentration of 20 ppmv; enclosed combustion devices shall have an efficiency of 95% or greater, or to an exit concentration of 20 ppmv, dry basis, corrected to 3% oxygen or provide a minimum residence time of 0.75 seconds at minimum temperature of 816°C. Flares will comply with requirements of 60.18. Leaks (>500 ppmv above background) or by visual inspections shall have a first attempt at repair made within 5 days and repaired no later than 15 days. Requirements for leaks, annual inspections, delay of repair.
t.	60.482-10a(i) through (l)	<i>Standards-Closed Vent Systems and Control Devices:</i> Exemptions for certain types of vapor collection systems meeting specific requirements and the recordkeeping requirements for exempt closed vent systems.
u.	60.482-11a	Standards : Connectors in gas/vapor service and in light liquid service.
v.	60.483-1a and 60.483-2a	<i>Alternative Standards for Valves:</i> Allowable Percentage of Valves Leaking and for Valves-Skip Period Leak Detection and Repair
w.	60.486a(a)	<i>Recordkeeping Requirements:</i> Combined records for affected facilities.
y.	60.486a(b) and (c)	Identification and log for leaks from pumps, compressors, valves and connectors.
z.	60.486a(d)	Records of design requirements for closed vent systems and control devices.
aa.	60.486a(e)	Log for equipment subject to 60.482-1a through 60.482-11a.
bb.	60.486a(f)	Records for pumps and valves that are unsafe-to-monitor and valves that are difficult-to-monitor.
cc.	60.486a(g)	Records for valve skip period leak detection and repair.
dd.	60.486a(h)	Log for pumps with dual mechanical seal systems and for compressor seal systems.
ee.	60.486a(j)	Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) [40 CFR 60, Subpart VVa] NSPS FOR EQUIPMENT LEAKS OF VOC IN THE SYNTHETIC ORGANIC CHEMICALS MANUFACTURING INDUSTRY

The permittee shall submit semiannual reports and other such notifications and reports as are required pursuant to 40 CFR Part 60, Subpart VVa, including the following sections briefly summarized:

a.	60.487a(a)	Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator.
b.	60.487a(c)	Submit semiannual reports that includes the content of 60.487a(c).
c.	60.487a(d)	Notify the Administrator 90 days before implementation, if the permittee elects to comply with the alternative provisions of 60.483-1a or 60.483-2a.
d.	60.487a(e)	Submit the results of all performance tests in accordance with 60.8, if applicable.

f) Testing Requirements

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

a. Emissions Limitation

Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 6.37 tons per year.

Applicable Compliance Method

Compliance with the annual emissions limitation shall be demonstrated through development and implementation of an LDAR program that complies with 40 CFR 60, Subpart VVa.

The permittee shall determine compliance with the standards specified in d)(16) as specified in 40 CFR 60.485a(b)-(h).

g) Miscellaneous Requirements

(1) None.