



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

9/8/2016

Certified Mail

Mr. Arthur Thomas
 POET Biorefining - Fostoria LLC
 2111 Sandusky Street
 Fostoria, OH 44830

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0374010235
 Permit Number: P0121200
 Permit Type: OAC Chapter 3745-31 Modification
 County: Seneca

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 Ohio EPA DAPC, Northwest District Office at (419)352-8461 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: Ohio EPA-NWDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
POET Biorefining - Fostoria LLC**

Facility ID:	0374010235
Permit Number:	P0121200
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	9/8/2016
Effective:	9/8/2016
Expiration:	8/31/2020



Division of Air Pollution Control
Permit-to-Install and Operate
for
POET Biorefining - Fostoria LLC

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Final Permit-to-Install and Operate
POET Biorefining - Fostoria LLC
Permit Number: P0121200
Facility ID: 0374010235
Effective Date: 9/8/2016

Authorization

Facility ID: 0374010235
Application Number(s): A0055520
Permit Number: P0121200
Permit Description: Chapter 31 Modification to install a 6th fermenter unit and increase ethanol production from 79 million gallons to 86 million gallons.
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: \$600.00
Issue Date: 9/8/2016
Effective Date: 9/8/2016
Expiration Date: 8/31/2020
Permit Evaluation Report (PER) Annual Date: Oct 1 - Sept 30, Due Nov 15

This document constitutes issuance to:

POET Biorefining - Fostoria LLC
2111 Sandusky Street
Fostoria, OH 44830

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

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

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

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
POET Biorefining - Fostoria LLC
Permit Number: P0121200
Facility ID: 0374010235
Effective Date: 9/8/2016

Authorization (continued)

Permit Number: P0121200

Permit Description: Chapter 31 Modification to install a 6th fermenter unit and increase ethanol production from 79 million gallons to 86 million gallons.

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

Emissions Unit ID:	F001
Company Equipment ID:	F001
Superseded Permit Number:	P0118925
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P801
Company Equipment ID:	Equipment Leaks-F004
Superseded Permit Number:	P0118925
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P802
Company Equipment ID:	Wetcake Pad - F007
Superseded Permit Number:	P0118925
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
POET Biorefining - Fostoria LLC
Permit Number: P0121200
Facility ID: 0374010235
Effective Date: 9/8/2016

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
POET Biorefining - Fostoria LLC
Permit Number: P0121200
Facility ID: 0374010235
Effective Date: 9/8/2016

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) None.
2. 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.



Final Permit-to-Install and Operate
POET Biorefining - Fostoria LLC
Permit Number: P0121200
Facility ID: 0374010235
Effective Date: 9/8/2016

C. Emissions Unit Terms and Conditions



1. F001, F001

Operations, Property and/or Equipment Description:

plant roadways and parking areas

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. None.

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 6/30/08	Develop and implement a site-specific work practice plan designed as described in paragraph d)(1) below to minimize or eliminate fugitive dust emissions. See b)(2)a.
b.	OAC rule 3745-31-05 (A)(3)(a)(ii), as effective 6/30/08	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate matter 10 microns or less in size (PM10) emissions from this air contaminant source since the potential to emit is less than 10 tons/year. See b)(2)b.
c.	OAC rule 3745-17-07(B)	See b)(2)c.
d.	OAC rule 3745-17-08(B)	See b)(2)d.

(2) Additional Terms and Conditions

- a. This BAT emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- c. This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).
- d. This emissions unit is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Work Practice Plan

The permittee shall develop and implement a site-specific work practice plan designed to minimize or eliminate fugitive dust from the permittee's paved and unpaved roadways and parking areas. This work practice plan shall include, at a minimum, the following elements:

- a. An identification of each roadway or parking area, or segment of roadway or parking area, for which the plan applies. The permittee can select whether to develop a plan based on segments or entire roads.
- b. A determination of the frequency that each roadway, parking area or segment will be inspected to determine if additional control measures are needed. The frequency of inspection can either be common for all segments of the roadway or parking areas or may be identified separately for various segments of the roadway or parking areas.
- c. The identification of the record keeping form/record that will be used to track the inspection and treatment of the roadways. This form/record should include, at a minimum, the following elements:
 - i. Roadway, parking area, or segment inspected;
 - ii. Date inspected;
 - iii. Name of employee responsible for inspection;
 - iv. Result of the inspection (needs treated or does not need treated);

- v. A description of why no treatment was needed;
 - vi. Date treated;
 - vii. Name of employee responsible for roadway, parking area, or segment treatment; and
 - viii. Method used to treat the roadway, parking area, or segment.
- d. A description of how and where the records shall be maintained.

The permittee shall begin using the Work Practice Plan within 30 days from the date Ohio EPA approved the initial plan. As needs warrant, the permittee can modify the Work Practice Plan. The permittee shall submit a copy of proposed revisions to the Work Practice Plan to the appropriate District Office or Local Air Agency (DO/LAA) for review and approval. The permittee can begin using the revised Work Practice Plan once the appropriate DO/LAA has approved its use.

(2) Work Practice Plan Inspections

Except as otherwise provided in this section, the permittee shall perform inspections of each of the roadway segments and parking areas at frequencies described in the Work Practice Plan. The purpose of the inspections is to determine the need for implementing control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

(3) Work Practice Plan Record Keeping

The permittee shall maintain records of the following information:

- a. The records required to be collected under the Work Practice Plan, and
- b. The date and reason any element of the Work Practice Plan was not implemented.

The permittee shall maintain these records in accordance to the Standard Terms and Conditions of Part A of this permit.

e) Reporting Requirements

- (1) Within 30 days from the final issuance of this permit, the permittee shall submit their proposed Work Practice Plan to the appropriate DO/LAA.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section



of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

- (3) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.

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. None.

g) Miscellaneous Requirements

- (1) None.

2. P801, Equipment Leaks-F004

Operations, Property and/or Equipment Description:

fugitive VOC emissions from equipment leaks

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. None.

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 6/30/08	Volatile organic compound (VOC) emissions shall not exceed 0.61 ton per month averaged over a rolling, 12-month period See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 6/30/08	The Best Available Technology (BAT) requirements do not apply to the VOC emissions from this air contaminant source since the potential to emit is less than 10 tons/year. See b)(2)b.
c.	OAC rule 3745-21-09(DD)	See b)(2)c.
d.	40 CFR Part 60 Subpart VVa; Standards of Performance for equipment leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry (SOCMI) for	The facility is subject to the provisions of Subpart VVa for equipment leaks of VOC.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	which construction, reconstruction, or modification commenced after 11/7/06. (40 CFR 60.480a-489a)	
e.	40 CFR 60.482-2a	Equipment leak standards for pumps in light liquid service
f.	40 CFR 60.482-3a	Equipment leak standards for compressors.
g.	40 CFR 60.482-4a	Equipment leak standards for pressure relief devices in gas/vapor service
h.	40 CFR 60.482-5a	Equipment leak standards for sampling connection systems
i.	40 CFR 60.482-6a	Equipment leak standards for open-ended valves or lines
j.	40 CFR 60.482-7a	Equipment leak standards for valves in gas/vapor service and in light liquid service
k.	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
l.	40 CFR 60.482-9a	Standards for delay of repair of equipment leaks
m.	40 CFR 60.482-10a	Standards for closed vent systems and control devices.
n.	40 CFR 60.482-11a	Equipment leak standards for connectors in gas/vapor service and light liquid service
o.	40 CFR 60.483-1a	Alternative standards for valves, via percentage of valves leaking ($\leq 2\%$)
p.	40 CFR 60.483-2a	Alternative standards for valves, via skip period leak detection and repair

(2) Additional Terms and Conditions

- a. This BAT emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- c. The permittee shall employ best available control measures for the emissions unit for the purpose of ensuring compliance with the above-mentioned applicable

requirements. The permittee has committed to implementing a Leak Detection and Repair (LDAR) program to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.

The permittee shall include the appropriate process equipment and regulated components in the LDAR program. The LDAR program shall comply with the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of OAC rule 3745-21-09(DD) (Leaks from Process Units that Produce Organic Chemicals) and 40 CFR, Part 60, Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry). In the case of overlapping provisions, the permittee shall comply with the more stringent requirement.

- d. Owners or operators may choose to comply with the provisions of 40 CFR, Part 65, Subpart F, to satisfy the requirements of 40 CFR 60.482 through 60.487 for an affected facility. When choosing to comply with 40 CFR, Part 65, Subpart F, the requirements of 40 CFR 60.485(d), (e) and (f) and 40 CFR 60.486(i) and (j) still apply. Other provisions applying to an owner or operator who chooses to comply with 40 CFR, Part 65 are provided in 40 CFR 65.1. [40 CFR 60.480(e)]

Owners or operators who choose to comply with 40 CFR, Part 65, Subpart F must also comply with 40 CFR 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of subpart A of Part 60 that are not mentioned in this paragraph do not apply to owners or operators of equipment subject to 40 CFR, Part 60, Subpart VV complying with 40 CFR, Part 65, Subpart F, except that provisions required to be met prior to implementing 40 CFR, Part 65 still apply. Owners and operators who choose to comply with 40 CFR, Part 65, Subpart F, must comply with 40 CFR, Part 65, Subpart A.

The permittee has chosen to comply with 40 CFR, Part 65, Subpart F for the valves, pumps, relief valves and connectors at this facility.

c) **Operational Restrictions**

- (1) When a leak is detected a weatherproof identification tag with the equipment identification number and the date detected shall be attached to the leaking equipment, valve, or seal. A record of the date the leak was first detected, the date of any attempted repair, and the date of final repair shall be entered into a log maintained for this purpose. Repair of a leak shall be attempted as soon as possible after it is detected.
- (2) 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.

(3) 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 60.485a(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.

(4) 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 60.482-9a, for delay of repair.

[40 CFR 60.482-2a(c) for pumps], [40 CFR 60.482-3a(g) for compressors], [40 CFR 60.482-4a(b) for pressure relief devices], [40 CFR 60.482-7a(d) for valves], [40 CFR 60.482-8a(c) for pumps/valves/connectors], [40 CFR 60.482-10a(g) for closed vent systems & control device], and [40 CFR 60.482-11a(d) for connectors]

(5) 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) The following information shall be recorded in a log that is kept in a readily accessible location.

	Applicable Rule	Requirements
a.	40 CFR 60.486a	Recordkeeping requirements
b.	40 CFR 60.486a(b)	Requirements to attach a weatherproof identification tag to leaking equipment
c.	40 CFR 60.486a(c)	Requirements to maintain a log of each leak detected for 2 years and the information to be maintained
d.	40 CFR 60.486a(d)	Required records for the design for the closed vent systems and control devices and period of time when they were not in operation as required
e.	40 CFR 60.486a(e)	Required records for equipment identification and records for each leak test conducted (dates and results)
f.	40 CFR 60.486a(f)	Required records for valves and pumps identified as unsafe or difficult to monitor
g.	40 CFR 60.486a(g)	Records required for valves where complying with 40 CFR 60.483-2a for skip leak detection and repair

h.	40 CFR 60.486a(h)	Records required for design criteria for the seal for pumps and compressors, i.e., the barrier fluid system and sensor
i.	40 CFR 60.480a(d); and 40 CFR 60.486a(i) and (j)	Records required for exemptions from the leak detection requirements, the analysis/data demonstrating that a piece of equipment is “not in VOC service” and the analysis demonstrating the design capacity of the process unit.

(2) The ancillary equipment, compressors, pumps, pressure relief devices, sampling connection systems, open end valves or lines, valves, flanges, and any other connectors in VOC service, shall be monitored to demonstrate that there are “no detectable emissions” using Method 21, 40 CFR Part 60, Appendix A; and the records of these inspections shall be maintained for 2 years following the date of inspection and shall be made available upon request.

(3) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with “no detectable emissions”, as indicated by an instrument reading of less than 500 ppm above background, measured by Method 21 from 40 CFR 60 Appendix A. After each pressure release, the pressure release device shall be returned to a condition of “no detectable emissions” as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 60.482-9a for delay of repair. Each pressure relief device in gas/vapor service shall be monitored in accordance with Method 21 unless it is routed to a process or fuel gas system, or is equipped with a closed-vent-system that captures and transports leakage through a pressure release device to a control device meeting the requirements of 40 CFR 60.482-10a.

The pressure relief device shall be monitored to confirm conditions of “no detectable emissions” no later than 5 days after the pressure release. As soon as practicable, but no later than 5 calendar days after each pressure release (except as allowed per 40 CFR 60.482-9a for delay or repair), the pressure relief device shall be returned to a condition of “no detectable emissions”, as indicated by a reading of less than 500 ppm above background.

Where there is a rupture disk upstream of the pressure relief device, a new rupture disk shall be installed no later than 5 calendar days after the pressure release, unless meeting the requirements of 40 CFR 60.482-9a for delay of repair.

(4) Each pump in light liquid service shall be monitored monthly for leaks, in accordance with Method 21 at 40 CFR 60 Appendix A, except where it can be demonstrated that:

a. The pump and barrier fluid system meet all of the following requirements:

i. The pump is equipped with a dual mechanical seal system that is:

(a) operated with a barrier fluid that is maintained, at all times, at a pressure that is greater than the pump stuffing box pressure; or

(b) is equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent

system to a control device meeting the requirements of 40 CFR 60.482-10a; or

- (c) is equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions; and
- ii. the barrier fluid system is in heavy liquid service or is not in VOC service; and
- iii. the barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both; and
- iv. each pump is checked by visual inspection each calendar week for indications of liquids dripping from the pump seals; and if there is evidence of leakage is monitored within 5 days following the inspection using Method 21; and
- v. each sensor is checked daily or is equipped with an audible alarm; or
- b. the pump is designated for “no detectable emissions”, as indicated by a reading of less than 500 ppm above background, using Method 21, and the pump has no external actuated shaft penetrating the pump housing and is monitored (in accordance with Method 21) initially upon designation, annually, and upon request of the Director; or
- c. the pump is routed to a process or fuel gas system or connected by a closed vent system to a control device meeting the requirements of 40 CFR 60.482-10a; or
- d. the pump is designated as unsafe-to-monitor and has been demonstrated to meet the requirements of this determination as required in 40 CFR 60.482-2a(g).

Each pump in light liquid service shall be visually inspected each calendar week for indications of liquids dripping from the pump seal, except as provided in 40 CFR 60.482-1a(f) for a batch process. A pump located at an unmanned plant site is exempt from the weekly visual inspections; however, each pump must be visually inspected as often as practicable and at least monthly.

For a pump, an instrument reading of 2,000 ppm or greater is a “leak detected”. When a leak is detected or a visual inspection determines liquids dripping from the pump, it shall be repaired as soon as practicable, but not later than 15 days after it is detected unless meeting the requirements of 40 CFR 60.482-9a for delay of repair. A first attempt repair of a detected leak shall be made within 5 days of detection.

- (5) Each compressor shall be equipped with a seal system and a barrier fluid system equipped with a sensor that will detect failure of the seal and/or barrier fluid system, except where meeting the requirements for a closed-vent-system in 40 CFR 60.482-10a, that captures and transports leakage from the compressor drive shaft to a process or fuel gas system or control device, or is designed and designated for “no detectable emissions”. The seal/barrier fluid system must meet the requirements of 40 CFR 60.482-3a(a) through (d) and must be visually inspected daily or be equipped a sensor

with an audible alarm. A leak is detected when the sensor indicates a failure of the seal/barrier systems. A compressor that can be demonstrated to operate with “no detectable emissions”, as indicated by a reading of less than 500 ppm above background, in accordance with 40 CFR 60.485a(c), can be monitored initially upon designation and annually thereafter; otherwise, monthly monitoring, in accordance with 40 CFR 60.485a(b), will be required.

When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 days after it is detected unless meeting the requirements of 40 CFR 60.482-9a for delay of repair. A first attempt repair of a detected leak shall be made within 5 days of detection.

- (6) Each valve in gas/vapor service and light liquid service shall be monitored monthly, in accordance with 40 CFR 60.485a(b) for leaks, with the following exception:
- a. the valve is designated for “no detectable emissions”, as indicated by a reading of less than 500 ppm above background in accordance with 40 CFR 60.485a(c), and has no external actuating mechanism in contact with the process fluids, it may be monitored initially upon designation and annually in accordance with 40 CFR 60.485a(c) thereafter; or
 - b. alternative standards can be implemented for valve leak detection, in accordance with 40 CFR 60.483-1a, based on 2.0% of valves leaking and where this option has been approved, by the regulating authority; or
 - c. the valve has been designated as unsafe-to-monitor as described in 40 CFR 60.486a(f)(1) and in accordance with 40 CFR 60.482-7a(g); or
 - d. the valve has been designated as difficult-to-monitor as described in 40 CFR 60.486a(f)(2) and in accordance with 40 CFR 60.482-7a(h).

Any valve for which a leak is not detected for 2 consecutive months may be monitored the first month of every quarter, beginning with the next quarter, and until a leak is detected, where monitoring shall again be required monthly until another successive 2 months of no leakage has been documented. As an alternative to monitoring the first month of every quarter, the owner/operator may subdivide the process units into 2 or 3 subgroups of valves and monitor each subgroup in a different month of the quarter provided each group is monitored every 3 months and records are maintained of the subgroups; if a leak is detected, the valve must be monitored monthly until a leak is not detected for 2 successive months.

An instrument reading of 500 ppm or greater is a “leak detected”. If a leak is detected it shall be repaired as soon as practicable, but not later than 15 days after it is detected, unless meeting the requirements of 40 CFR 60.482-9a for delay of repair. A first attempt repair of a detected leak shall be made within 5 days of detection and would include (but not be limited to) work practices identified in 40 CFR 60.482-7a(e).

- (7) Each connector in gas/vapor service and in light liquid service shall be monitored for leaks within 12 months after initial startup, following any process change for the connectors involved, and in accordance with 40 CFR 60.482-11a. Except as required

for closed-vent-systems, all such connectors shall be monitored according to the following schedule:

- a. if the percent of leaking connectors in the process unit was greater than or equal to 0.5%, then subsequent monitoring to detect leaks must be conducted within 12 months; or
- b. if the percent of leaking connectors in the process unit was greater than or equal to 0.25% but less than 0.5%, then subsequent monitoring to detect leaks must be conducted within 4 years, with the option to monitor at least 40% of the connectors within 2 years of the start of the monitoring period, provided all the connectors are monitored by the end of the 4-years; or
- c. if the percent of leaking connectors in the process unit was less than 0.25%, the frequency of monitoring shall/may follow the schedule calculated in accordance with 40 CFR 60.482-11a(b)(3)(iii); and
- d. records must be maintained for the start date and end date of each monitoring period, and the monitoring results to support the scheduled used.

If an instrument reading greater than or equal to 500 ppm is measured, a leak is detected.

- (8) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system meeting the requirements of 40 CFR 60.482-5a(b), except in situ sampling systems and sampling systems without purges are exempt from these requirements.
- (9) Closed-vent-systems and control devices shall be operated in compliance with the following provision:
 - a. Vapor recovery systems (e.g., condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95% or greater, or to an exit concentration of 20 ppmv, whichever is less stringent.
 - b. Enclosed combustion devices shall be designed and operated to reduce VOC emissions vented to them with an efficiency of 95% or greater, or to an exit concentration of 20 ppmv, on a dry basis, corrected to 3% oxygen, whichever is less stringent; or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.
 - c. Flares shall comply with the requirements of 40 CFR 60.18 and 40 CFR 60.485a(g).
 - d. Each control device shall be monitored to ensure they are operated and maintained in conformance with their design.
 - e. Each closed-vent-system shall be inspected initially and annually thereafter in accordance with 40 CFR 60.482-10a(f) and monitored in accordance with 40 CFR 60.485a(b). A vapor recovery system or closed-vent-system is exempt from this inspection requirement if operated under a vacuum.

- f. Leaks, as indicated by an instrument reading of 500 ppmv above background or by visual inspection, shall be repaired as soon as practicable, but not later than 15 days after it is detected, unless meeting the requirements of delay of repair in accordance with 40 CFR 60.482-10a(h). A first attempt repair of a detected leak shall be made within 5 days of detection.
 - g. Closed-vent-systems and control devices shall be operated at all times when emissions may be vented to them.
- (10) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection methods at pumps, valves, and/or connectors in heavy liquid service; and pressure relief devices in light liquid or heavy liquid service; and the evidence is not eliminated within 5 days of detection, the permittee shall follow these procedures:
- a. Monitor the equipment within 5 days by the appropriate method specified in 40 CFR 60.485a. An instrument reading of 10,000 ppm or greater is a “leak detected”.
 - b. If a leak is detected it shall be repaired as soon as practicable, but not later than 15 days after it is detected unless meeting the requirements of 40 CFR 60.482-9a. A first attempt at repair shall be made within 5 days of detection and would include (but not be limited to) work practices identified in 40 CFR 60.482-2a(c)(2) and 40 CFR 60.482-7a(e).
- (11) The permittee may monitor at any time during the specified (per rule) monitoring period (i.e., monthly, quarterly, annually) which is a reasonable interval after completion of the previous monitoring event, as long as the time interval meets these requirements:
- a. when monitoring is conducted quarterly, monitoring events must be separated by at least 30 calendar days;
 - b. when monitoring is conducted annually, monitoring events must be separated by at least 120 calendar days;
 - c. when monitoring is conducted 3 quarters per year, monitoring events must be separated by at least 90 calendar days; and
 - d. when qualified and monitoring is conducted semiannually (every 2 quarters), monitoring events must be separated by at least 60 calendar days.
- (12) The permittee shall record and maintain all of the records required to document visual inspections and monitoring of all ancillary equipment, compressors, pumps, pressure relief devices, sampling connection systems, open end valves or lines, valves, flanges, and any other connectors in VOC service, as identified above, using a list of equipment identification numbers assigned to each potential point of leakage. The permittee shall also comply with the recordkeeping requirements and maintain the records identified in 40 CFR 60.486a, including the date each leak was detected and dates of attempted and final repairs.

- (13) Any determination that a piece of ancillary equipment is unsafe or difficult to monitor shall be documented to meet the appropriate requirements identified in Part 60, Subpart VVa, e.g., as identified in: 40 CFR 60.482-2a(g) for pumps; 40 CFR 60.482-6a(d) or (e) for open-ended valves or lines; 40 CFR 60.482-7a(g) and (h) for valves; 40 CFR 60.482-10a(j), (k), or (l) for closed-vent-systems; and 40 CFR 60.482-11a(e) for connectors. Records must be maintained for each determination, in accordance with 40 CFR 60.486a(f). Any delay of repair shall meet the requirements of 40 CFR 60.482-9a.
- (14) The permittee shall maintain a record of the following information for each monitoring event required to demonstrate compliance with the standards for pumps in light liquid service in 40 CFR 60.482-2a; compressors in 40 CFR 60.482-3a; valves in gas/vapor and light liquid service in 40 CFR 60.482-7a; pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid and heavy liquid service in 40 CFR 60.482-8a; connectors in gas/vapor and light liquid service in 40 CFR 60.482-11a; and valves in 40 CFR 60.483-2a:
- a. monitoring instrument identification;
 - b. operator identification;
 - c. equipment identification;
 - d. date of monitoring; and
 - e. instrument reading.
- (15) When each leak is detected as specified in 40 CFR 60.482-2a for pumps in light liquid service; 40 CFR 60.482-3a for compressors; 40 CFR 60.482-7a for valves in gas/vapor and light liquid service; 40 CFR 60.482-8a for pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid and heavy liquid service; 40 CFR 60.482-11a for connectors in gas/vapor and light liquid service; and 40 CFR 60.483-2a for valves, the following requirements apply:
- a. the leaking equipment shall be marked with a clearly visible, weatherproof tag showing the equipment identification number;
 - b. the tag identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 60.482-7a(c) and no leak has been detected during those 2 months;
 - c. the tag identification on a connector may be removed after it has been monitored as specified in 40 CFR 60.482-11a(b)(3)(iv) and no leak has been detected during that monitoring; and
 - d. the tag identification on all other equipment other than a valve or connector may be removed after it has been repaired.
- (16) The following information shall be recorded in a log for each leak that is detected and these records shall be kept for 2 years in a readily accessible location:
- a. the identification numbers of the monitoring instrument and leaking equipment;

- b. the name of the operator conducting the monitoring;
 - c. the date each leak was detected and the date(s) of each attempt to repair them;
 - d. the repair methods applied in each attempt to repair each leak;
 - e. the maximum instrument reading measured by Method 21 of Appendix A-7 of Part 60 at the time the leak is successfully repaired or at the time it is determined to be non-repairable (except where a pump is repaired by eliminating dripping liquids);
 - f. identification of equipment exceeding the applicable leak detection limit 15 days after discovery of the leak and the maximum instrument reading measured by Method 21;
 - g. the reason for any delay of repair, where a leak is not repaired within 15 calendar days after being discovered;
 - h. if a decision has been made that repair of a leak cannot be completed without a process shutdown, the signature of the person authorized to make that determination;
 - i. the expected date of successful repair of each leak that is not repaired within 15 days;
 - j. dates of process unit shutdowns that occur while the equipment is unrepaired; and
 - k. the date of successful repair of each leak.
- (17) The following information pertaining to the design requirements for closed vent systems and control devices shall be recorded and kept in a readily accessible location:
- a. detailed schematics, design specifications, and piping and instrumentation diagrams;
 - b. the dates and descriptions of any changes in the design specifications;
 - c. a description of the parameter(s) monitored, as required in 40 CFR 60.482-10a(e), to ensure that control devices are operated and maintained in conformance with their design;
 - d. an explanation of why the parameter(s) was/were selected for the monitoring;
 - e. periods when the closed vent systems and control devices required in 40 CFR 60.482-2a, 40 CFR 60.482-3a, 40 CFR 60.482-4a, and 40 CFR 60.482-5a are not operated as designed, including periods when a flare pilot light does not have a flame; and

- f. the dates of startups and shutdowns of the closed vent systems and control devices required per 40 CFR 60.482–2a, 40 CFR 60.482–3a, 40 CFR 60.482–4a, and 40 CFR 60.482–5a.
- (18) The following information pertaining to all equipment subject to the requirements in 40 CFR 60.482–1a to 40 CFR 60.482–11a shall be recorded in a log that is kept in a readily accessible location:
- a. a list of identification numbers for equipment subject to the requirements of Part 60 Subpart VVa;
 - b. a list of identification numbers for equipment that are designated for “no detectable emissions” under the provisions of 40 CFR 60.482–2a(e) for pumps in light liquid service; 40 CFR 60.482–3a(i) for compressors; and 40 CFR 60.482–7a(f) for valves in gas/vapor and light liquid service; and the designation of equipment as subject to these requirements signed by the person authorized to make this determination;
 - c. a list of equipment identification numbers for pressure relief devices required to comply with 40 CFR 60.482–4a;
 - d. for each compliance demonstration conducted as required in 40 CFR 60.482–2a(e), for pumps in light liquid service; 40 CFR 60.482–3a(i), for compressors; 40 CFR 60.482–4a, for pressure relief devices; and 40 CFR 60.482–7a(f), for valves in gas/vapor and light liquid service:
 - i. the dates of each compliance test;
 - ii. the background level measured during each compliance test; and
 - iii. the maximum instrument reading measured at the equipment during each compliance test;
 - e. a list of identification numbers for equipment in vacuum service;
 - f. a list of identification numbers for equipment that the permittee designates as operating in VOC service less than 300 hr/yr in accordance with 40 CFR 60.482–1a(e), a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr;
 - g. the date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service;
 - h. records of the information for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of Appendix A–7 of Part 60 and 40 CFR 60.485a(b).
 - i. date of calibration and initials of operator performing the calibration;

- ii. calibration gas cylinder identification, certification date, and certified concentration;
 - iii. instrument scale(s) used;
 - iv. a description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 of appendix A-7 of this part;
 - v. results of each calibration drift assessment required by 40 CFR 60.485a(b)(2) (i.e., the instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value); and
 - vi. if the permittee makes their own calibration gas, a description of the procedure used;
 - i. the connector monitoring schedule for each process unit as specified in 40 CFR 60.482-11a(b)(3)(v); and
 - j. the records of each release from a pressure relief device subject to the requirements of 40 CFR 60.482-4a.
- (19) The following information pertaining to all valves subject to the requirements of 40 CFR 60.482-7a(g) and (h), all pumps subject to the requirements of 40 CFR 60.482-2a(g), and all connectors subject to the requirements of 40 CFR 60.482-11a(e) shall be recorded in a log that is kept in a readily accessible location:
- a. a list of identification numbers for valves, pumps, and connectors that are designated as unsafe-to-monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe-to-monitor, and the plan for monitoring each valve, pump, or connector; and
 - b. a list of identification numbers for valves that are 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.
- (20) The following information shall be recorded for valves complying with the alternative monitoring standards for valves, where after 2 consecutive quarterly leak detection periods the percent of valves leaking is less than or equal to 2.0%:
- a. a schedule of the monitoring, which shall meet the requirements of 40 CFR 60.483-2a(b); and
 - b. the percent of valves found leaking during each monitoring period.
- (21) The following information shall be recorded in a log that is kept in a readily accessible location:
- a. the design criterion for each sensor that is used to indicate failure of the seal system or barrier fluid system in a pump, as required in 40 CFR 60.482-2a(d)(5),

and/or in a compressor, as required by 40 CFR 60.482–3a(e)(2); and explanation of the design criterion; and

b. any changes to this criterion and reasons for the changes.

(22) The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in 40 CFR 60.480a(d):

a. an analysis demonstrating the design capacity of the affected facility;

b. a statement listing the feed or raw materials and products from the affected facilities; and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol; and

c. an analysis demonstrating that equipment is not in VOC service.

(23) 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) The owner/operator shall submit semiannual reports that include the information identified in 40 CFR 60.487a and the report shall include the number of leaks detected during the reporting period, the identification of the equipment where each leak was detected, and the dates of attempted and final repair. The report shall include the date of any leak that was detected and not repaired within 15 days of discovery, the reason for the delay of repair, the date of final repair, and any Method 21 test results conducted for the leak during the reporting period.

(2) All subsequent semiannual reports shall include the following information, summarized from the recordkeeping requirements of 40 CFR 60.486a and identified for each process unit subject to Part 60 Subpart VVa:

a. For each month during the semiannual reporting period the semiannual report must include the following information:

i. number of valves for which leaks were detected as described in 40 CFR 60.482–7a(b) or 40 CFR 60.483–2a;

ii. number of valves for which leaks were not repaired as required in 40 CFR 60.482–7a(d)(1);

iii. number of pumps for which leaks were detected as described in 40 CFR 60.482–2a(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii);

iv. number of pumps for which leaks were not repaired as required in 40 CFR 60.482–2a(c)(1) and (d)(6);

v. number of compressors for which leaks were detected as described in 40 CFR 60.482–3a(f);



- vi. number of compressors for which leaks were not repaired as required in 40 CFR 60.482–3a(g)(1);
 - vii. number of connectors for which leaks were detected as described in 40 CFR 60.482–11a(b);
 - viii. number of connectors for which leaks were not repaired as required in 40 CFR 60.482–11a(d); and
 - ix. the facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible;
- b. dates of process unit shutdowns which occurred within the semiannual reporting period; and
 - c. revisions to items reported in the initial or subsequent semiannual compliance reports if changes have occurred since the last compliance report.
- (3) If the permittee elects to comply with the provisions of 40 CFR 60.483–1a or 40 CFR 60.483–2a, the alternative standards for valves demonstrated to have less than or equal to 2.0% of the facility valves leaking, the permittee shall notify the appropriate district or local office of the Ohio EPA Division of Air Pollution Control of the intention to demonstrate compliance with the alternative standard at least 90 days before implementing either of these provisions.
- (4) The permittee shall report the results of all performance tests in accordance with 40 CFR 60.8 of the General Provisions. The provisions of 40 CFR 60.8(d) do not apply to affected facilities subject to the provisions of Subpart VVa except that the permittee must notify the appropriate district or local office of the Ohio EPA Division of Air Pollution Control of the schedule for the initial performance tests at least 30 days before the initial compliance demonstration.
- (5) 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) The following testing requirements from Part 60 Subpart VVa apply to this emissions unit:

	Applicable Rule	Requirements
a.	40 CFR 60.485a	Test methods and procedures
b.	40 CFR 60.485a(b)	Method 21 shall be used to determine the presence of a leak in accordance with this paragraph
c.	40 CFR 60.485a(c)	Method 21 shall be used for determining compliance with “no detectable emissions” in accordance with this paragraph
d.	40 CFR 60.485a(d)	Demonstration that a piece of equipment is “not in VOC service”
e.	40 CFR 60.485a(e)	Demonstration that a piece of equipment is “in light liquid service”

f.	40 CFR 60.485a(f)	Sample used to demonstrate "in VOC or liquid service" shall be representative of the process fluid or gas used in the determination.
g.	40 CFR 60.485a(g)	Standards for a flare

(2) 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: VOC emissions shall not exceed 0.61 ton per month averaged over a rolling, 12-month period

Applicable Compliance Method: The VOC emission limitation above was calculated by multiplying the respective emission factors and control efficiencies of all the proposed equipment subject to the LDAR program, as submitted by the permittee in Permit to Install/Operate (PTIO) application # A0055520 and dividing by 12 months/year. The following is a list of the proposed pieces of equipment and the relevant type of service:

- i. pump seals: 7 @ 15% VOC by weight and 7 @ 100% VOC by weight
- ii. valves in heavy liquid service: 137 @ 15% VOC by weight and 271 @ 100% VOC by weight
- iii. valves in gas service: 1 @ 15% VOC by weight and 33 @ 100% VOC by weight
- iv. relief valves: 10 @ 100% VOC by weight
- v. connectors: 443 @ 15% VOC by weight and 802 @ 100% VOC by weight

Therefore, provided compliance is shown with the LDAR program, compliance with the VOC emission limitation shall be also be demonstrated.

g) Miscellaneous Requirements

(1) None.

3. P802, Wetcake Pad - F007

Operations, Property and/or Equipment Description:

wetcake storage and loadout

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. None.

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 6/30/08	0.23 ton volatile organic compound (VOC) per month averaged over a 12-month rolling period See b)(2)a.
b.	OAC rule 3745-31-05 (A)(3)(a)(ii), as effective 6/30/08	The Best Available Technology (BAT) requirements do not apply to the VOC emissions from this air contaminant source since the potential to emit is less than 10 tons/year. See b)(2)b.
c.	OAC rule 3745-31-05(F)	See c)(1)

- (2) Additional Terms and Conditions
 - a. This BAT emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
 - b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- c) Operational Restrictions
 - (1) The following operational restrictions have been included in this permit for the purpose of establishing legally and practically enforceable requirements which limit PTE:
 - a. Wetcake that shows any visible signs of spoilage (i.e. mold/fungal growth) shall be removed (within 72 hrs) from the wetcake storage area. Material removed from the storage area may either be recycled back into the system or removed off the property.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall perform daily visible checks for any sign of wetcake spoilage (i.e. mold/fungal growth). The presence or absence of any spoilage shall be noted in an operations log, as well as the date and time the daily check was performed. If the presence of spoilage is observed, the permittee shall also note the following in the operations log:
 - a. the total duration the spoiled material remained on the pad.
- e) Reporting Requirements
 - (1) 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. Emission Limitation:
0.23 ton VOC per month averaged over a 12-month rolling period



Final Permit-to-Install and Operate
POET Biorefining - Fostoria LLC
Permit Number: P0121200
Facility ID: 0374010235
Effective Date: 9/8/2016

Applicable Compliance Method:

The VOC emission limitation above represents the potential to emit for this emissions unit and was calculated by multiplying an emission factor of 0.0083 lb VOC/ton of wetcake (Diversified Energy Facility in Morris, MN, stack test date: November 2, 2004) by a maximum annual wetcake throughput of 657,000 tons/yr and dividing by 2000 lbs/ton and 12 months/yr.

g) Miscellaneous Requirements

- (1) None.