



Environmental Protection Agency

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

1/6/2012

Bruce Bailey  
Central Ohio BioEnergy - Anaerobic Digestion Facility  
7624 Riverview Road  
Cleveland, OH 44141

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

Facility ID: 0125044001  
Permit Number: P0109015  
Permit Type: Initial Installation  
County: Franklin

Certified Mail

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

Dear Permit Holder:

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

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

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

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

Sincerely,

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

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



PUBLIC NOTICE

1/6/2012 Issuance of Draft Air Pollution Permit-To-Install and Operate

Central Ohio BioEnergy - Anaerobic Digestion Facility

2500 Jackson Pike (SR 104),

Columbus, OH 43223

Franklin County

FACILITY DESC.: Nitrogenous Fertilizer Manufacturing

PERMIT #: P0109015

PERMIT TYPE: Initial Installation

PERMIT DESC: Installation and operation of an anerobic digester system with an emergency flare

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



**Ohio**

**Environmental  
Protection Agency**

**DRAFT**

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

**Central Ohio BioEnergy - Anaerobic Digestion Facility**

Facility ID:	0125044001
Permit Number:	P0109015
Permit Type:	Initial Installation
Issued:	1/6/2012
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance





Division of Air Pollution Control
Permit-to-Install and Operate
for
Central Ohio BioEnergy - Anaerobic Digestion Facility

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## Authorization

Facility ID: 0125044001  
Application Number(s): A0043117  
Permit Number: P0109015  
Permit Description: Installation and operation of an anerobic digester system with an emergency flare  
Permit Type: Initial Installation  
Permit Fee: \$400.00 *DO NOT send payment at this time, subject to change before final issuance*  
Issue Date: 1/6/2012  
Effective Date: To be entered upon final issuance  
Expiration Date: To be entered upon final issuance  
Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

Central Ohio BioEnergy - Anaerobic Digestion Facility  
2500 Jackson Pike (SR 104)  
Columbus, OH 43223

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

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

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

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally  
Director



## **Authorization (continued)**

Permit Number: P0109015

Permit Description: Installation and operation of an anerobic digester system with an emergency flare

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

<b>Emissions Unit ID:</b>	<b>P002</b>
Company Equipment ID:	Emergency Flare
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



## **A. Standard Terms and Conditions**



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

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

**2. Who is responsible for complying with this permit?**

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

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

**3. What records must I keep under this permit?**

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

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

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

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

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

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

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

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



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

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

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

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

**7. What reports must I submit under this permit?**

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

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

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

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

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

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

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

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

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

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

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

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

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

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting<sup>1</sup> a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

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

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

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



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

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

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

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

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

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

## **B. Facility-Wide Terms and Conditions**

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) None.

## **C. Emissions Unit Terms and Conditions**



1. P002, Emergency Flare

Operations, Property and/or Equipment Description:

Anaerobic Digester System controlled by a flare (includes solids and liquid reception tanks and bins, anaerobic digestion tanks, pasteurization, dewatering, and biogas collection)

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

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

a. b)(1)d and d)(3)

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

a. 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.

Table with 2 columns: Applicable Rules/Requirements and Applicable Emissions Limitations/Control Measures. Row a: ORC 3704.03(T) with SO2, CO, and VOC limitations. Row b: OAC rule 3745-31-05(A)(3) with NOx, PM10, and VOC limitations.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/2006	See b)(2)b.
d.	OAC rule 3745-31-05(E) [State-only enforceable limitation to ensure compliance with OAC rule 3745-15-07]	See b)(2)c.
e.	OAC rule 3745-17-11(B)	See b)(2)d.
f.	OAC rule 3745-17-07(B)(1)	See b)(2)e.
g.	OAC rule 3745-18-06(E)	The emission limitations of this rule are less stringent than the emission limitations established by ORC 3704.03(T).

(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.

BAT is not required if the air contaminant source was installed or modified on or after August 3, 2006 and has the potential to emit, taking into account air pollution controls installed on the source, less than ten tons per year of emissions of an air contaminant or precursor of an air contaminant for which a national ambient air quality standard has been adopted under the Clean Air Act.

The Best Available Technology (BAT) requirements listed under OAC rule 3745-31-05(A)(3) do not apply to the NO<sub>x</sub> or PM<sub>10</sub> emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year taking.

- c. Anaerobic digesters, including all associated equipment and grounds, shall be designed, operated, and maintained so as to prevent the emission of objectionable odors.

- d. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the the process weight rate is equal to zero. Process weight is defined in OAC rule 3745-17-01(B)(17).
  - e. This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.
  - f. The lb/mmBtu and ton per year emissions limitations for NO<sub>x</sub>, CO, PM<sub>10</sub>, and VOC are based on the emissions unit's potentials to emit. No monitoring, recordkeeping, or reporting requirements are necessary to demonstrate compliance with these emissions limitations.
  - g. A pilot flame shall be maintained at all times in the flare's pilot light burner.
- c) Operational Restrictions
- (1) Digester gas combusted in this emissions unit shall not exceed 500 parts per million on a volume basis (ppm<sub>v</sub>) of hydrogen sulfide.
  - (2) Digester gas combusted in the flare serving this emissions unit shall not be less than 500 Btu/scf.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall monitor and record hydrogen sulfide concentrations when operating the emissions unit with digester gas using one of the two following options:

Option 1: Weekly gas detector tube sampling. The accuracy of gas detector tubes is presumed to be ± 10%, unless the permittee is able to demonstrate better accuracy of the detector tubes compared to a certified gas standard. The permittee shall perform gas detector tube monitoring in accordance with the manufacturer's instructions for use of the detector tubes and associated sampling system. Any deviations from the manufacturer's instructions should be recorded with the concentration results of the sampling.

Option 2: Continuous digester gas monitoring system. The permittee may install a sampling and analysis system to continuously monitor and record the H<sub>2</sub>S content of the digester gas. The permittee shall properly install, operate, and maintain a continuous digester gas H<sub>2</sub>S monitoring device and recorder that measures and records the H<sub>2</sub>S concentrations in the digester gas when the emissions unit is in operation, including periods of startup and shutdown. The H<sub>2</sub>S monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 5 and shall be capable of accurately measuring the H<sub>2</sub>S concentration. The H<sub>2</sub>S monitoring device and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee.

Whenever the monitored value for hydrogen sulfide exceeds the lower limit of the accuracy of the monitoring system as measured by either of the above monitoring options, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- (i) the date and time the deviation began;
- (ii) the magnitude of the deviation at that time;
- (iii) the date the investigation was conducted;
- (iv) the name(s) of the personnel who conducted the investigation; and
- (v) the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the hydrogen sulfide concentration below the maximum limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- (i) a description of the corrective action;
- (ii) the date the corrective action was completed;
- (iii) the date and time the deviation ended;
- (iv) the total period of time (in minutes) during which there was a deviation;
- (v) hydrogen sulfide readings immediately after the corrective action was implemented; and
- (vi) the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

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

## e) Reporting Requirements

- (1) 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.
- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director 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:

Emissions of sulfur dioxide (SO<sub>2</sub>) shall not exceed 13.1 tons per year.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the annual emissions limitation through the monitoring and recordkeeping in d)(1) and the following equation:

$$\text{SO}_2 \text{ ton/yr} = F \times (\text{H}_2\text{S ppm}_v / 1,000,000) \times 0.088 \text{ lb H}_2\text{S/ft}^3 \text{ H}_2\text{S} \times 1.88 \text{ lb SO}_2/\text{lb H}_2\text{S} \times 8,760 \text{ hr/yr} \times 1 \text{ ton}/2,000 \text{ lb}$$

Where:

F = 36,000 cubic feet per hour (maximum flare exhaust volume)

H<sub>2</sub>S ppm<sub>v</sub> = average concentration of H<sub>2</sub>S in biogas, from d)(1)

If required, sulfur dioxide emissions shall be determined according to test Methods 1 - 4, and 6 as set forth in 40 CFR, Part 60 Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Central District Office.

b. Emissions Limitation:

Emissions of carbon monoxide (CO) shall not exceed 0.37 lb / mmBtu.

Applicable compliance method:

Compliance shall be demonstrated using the emissions factor for CO from U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 13.5 Table 13.5-1 (9/91).



If required, CO emissions shall be determined according to test Methods 1 – 4, and 10 as set forth in 40 CFR, Part 60 Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Central District Office.

c. Emissions Limitation:

Emissions of volatile organic compound (VOC) shall not exceed 0.14 lb/mmBtu

Applicable Compliance Method:

Compliance shall be demonstrated using the emissions factor for VOC from U.S. EPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 13.5 Table 13.5-1 (9/91).

If required, VOC emissions shall be determined according to test Methods 1-4, and 25A as set forth in 40 CFR, Part 50 Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Central District Office.

d. Emissions Limitation:

Emissions of oxides of nitrogen (NOx) shall not exceed 0.068 lb/mmBtu and 5.90 ton/yr

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated using the emission factor for NOx from U.S. EPA reference document AP-42 Fifth Edition, Compilation of Air Pollution Emission Factors, Section 13.5 Table 13.5-1 (9/1991).

Compliance with annual emission limitation shall be demonstrated by multiplying the hourly emission limitation by the rated capacity of the flare (19.8 mmBtu/hr) and a conversion factor of 8,760 hours per year and 1 ton/2,000 lbs. Provided compliance with the hourly emission limitation is shown, compliance with the annual emission limitation will be assumed.

If required, NOx emissions shall be determined according to test Methods 1-4, and 7 or 7E as set forth in 40 CFR Part 60 Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Central District Office.

e. Emissions Limitation:

Emissions of particulate matter 10 microns in diameter or less (PM10) shall not exceed 0.011 lb/mmBtu and 0.95 ton/yr

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated using the emission factor for PM10 from U.S. EPA reference document AP-42 Fifth Edition, Compilation of Air Pollution Emission Factors, Section 13.5 Table 13.5-1(9/1991).

Compliance with annual emission limitation shall be demonstrated by multiplying the hourly emission limitation by the rated capacity of the flare (19.8 mmBtu/hr) and a conversion factor of 8,760 hours per year and 1 ton/2,000 lbs. Provided compliance with the hourly emission limitation is shown, compliance with the annual emission limitation will be assumed.

If required, PM10 emissions shall be determined according to test Methods 1-4, and 201A and 202 as set forth in 40 CFR Part 60 Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Central District Office.

g) Miscellaneous Requirements

- (1) The following list of approved source materials is provided for informational purposes only. The permittee is authorized to accept the following feed materials for use in the anaerobic digester in Permit to Install 4IN00200 issued by the Division of Surface Water:
  - a. sewage sludge;
  - b. septage & grey water;
  - c. animal manure;
  - d. food wastes in liquid form, semi-solid form and solid form;
  - e. fats, oils and greases (FOG);
  - f. energy crops;
  - g. glycerin byproducts from bio-diesel production; and
  - h. stillage byproducts from ethanol production.

Any additional feed materials not listed above must be authorized by Ohio EPA, Central District Office prior to processing with sewage sludge at the facility.