Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

Certified Mail

2/29/2012

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

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

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0125044001
Permit Number: P0109080
Permit Type: Administrative Modification
County: Franklin

Dear Permit Holder:

Enclosed please find a final 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. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI 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
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPC Web page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern

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

Cc: Ohio EPA-CDO

Response to Comments

Facility ID:	0125044001
Facility Name:	Central Ohio BioEnergy - Anaerobic Digestion Facility
Facility Description:	anaerobic digestion system
Facility Address:	2500 Jackson Pike (SR 104) Columbus, OH 43223 Franklin County
Permit:	P0109080, Permit-To-Install and Operate - Administrative Modification
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the The Columbus Dispatch on 01/09/2012. The comment period ended on 02/08/2012.	
Hearing date (if held)	**02/27/2012**

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: Emission Limitations

a. Comment: One commenter requested that no increase in emissions be allowed from the facility.

b. Response: Ohio EPA does not have sufficient grounds to deny the requested emissions increase. This determination is based upon the submitted permit applications, requested emissions limitations, and the facility's commitment to continue to comply with applicable air pollution control rules and regulations. Ohio EPA has a mandate to protect human health and welfare. State and federal regulations are designed to protect the sensitive populations with an additional degree of safety built into allowable emission limitations. The emission limitations within this permit comply with these rules.

2. Topic: Emission Monitoring

a. Comment: One commenter stated that new air permits should not be allowed for this facility as no air monitoring had been performed in the area and no compliance tests have been performed at the facility.

b. Response: Not having air monitoring in the immediate vicinity of the facility is not grounds for denying issuance of these permits. Monitors for criteria air pollutants are located throughout central Ohio, including Columbus, to determine compliance with the National Ambient Air Quality Standards and to provide data regarding air pollution episodes. Information regarding

the Air Monitoring Network and current air monitoring data may be found on Ohio EPA's website at http://www.epa.state.oh.us/dapc/ams/amsmain.aspx.

Emissions testing is not required for the emission points at the facility because they are well-understood and well-characterized by both U.S. EPA and Ohio EPA. The biogas engine has been certified by U.S. EPA as meeting applicable requirements and guaranteed by the manufacturer. Ohio EPA considers the certification and guarantee sufficient demonstration of the biogas engine's ability to comply with permitted emission limitations.

Emission factors for the flare have been well-characterized by U.S. EPA and industry. Ohio EPA has a high degree of confidence with the established emission factors used to calculate emissions from the flare and to demonstrate compliance with permitted emission limitations.

3. Ohio EPA also received a copy of an article titled "Is 'Green Biogas' Killing people now?" The document has been evaluated and has been determined to not be applicable to these permits. The document has been distributed to appropriate Ohio EPA divisional offices.

Ohio | Environmental Protection Agency

FINAL

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

Facility ID:	0125044001
Permit Number:	P0109080
Permit Type:	Administrative Modification
Issued:	2/29/2012
Effective:	2/29/2012
Expiration:	6/1/2019

Ohio Environmental Protection Agency

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): M0001465
Permit Number: P0109080
Permit Description: Modification of PTIO P0103795 to reflect installation and operation of a smaller CHPU and outdoor receiving areas.
Permit Type: Administrative Modification
Permit Fee: $300.00
Issue Date: 2/29/2012
Effective Date: 2/29/2012
Expiration Date: 6/1/2019
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

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: P0109080
Permit Description: Modification of PTIO P0103795 to reflect installation and operation of a smaller CHPU and outdoor receiving areas.

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

Emissions Unit ID:	**B001**
Company Equipment ID:	CHPU
Superseded Permit Number:	P0103795
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P001**
Company Equipment ID:	Anaerobic digester
Superseded Permit Number:	P0103795
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[1] a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

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

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

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

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

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

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

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

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

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

B. Facility-Wide Terms and Conditions

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

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

      (1) None.

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

      (1) None.

2. The following emissions units contained in this permit are subject to 40 CFR Part 60, Subpart JJJJ: B001. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Ohio EPA Central District Office.

C. Emissions Unit Terms and Conditions

1. B001, CHPU

Operations, Property and/or Equipment Description:

1,475 bhp digester gas SI ICE (gross output) with a maximum heat input of 9.7 mmBtu/hour

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.	ORC 3704.03(T)	**When burning digester gas:** Emissions of oxides of nitrogen (NOx) shall not exceed 1.0 g /hp-hr (gram per horsepower-hour). Emissions of carbon monoxide (CO) shall not exceed 2.2 g/hr-hr. Emissions of sulfur dioxide (SO_2) shall not exceed 3.21 lb/hr and 14.06 tons/yr. **When burning natural gas:** Emissions of NOx shall not exceed 1.0 g/hp-hr. Emissions of CO shall not exceed 2.0 g/hr-hp.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	**When burning digester gas**: Emissions of volatile organic compounds (VOCs) shall not exceed 2.27 pounds per hour and 9.95 tons per year. Emissions of particulate matter 10 microns in diameter or less (PM10) shall not exceed 0.06 pound per hour and 0.26 ton per year. **When burning natural gas:** Emissions of VOCs shall not exceed 2.27 pounds per hour and 9.95 tons per year. Emissions of PM10 shall not exceed 0.01 pound per hour and 0.01 ton per year. Emissions of SO_2 shall not exceed 0.01 pound per hour and 0.02 ton per year. See b)(2)a.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/2006	See b)(2)b.
d.	OAC rule 3745-110-03(F)(2)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to ORC 3704.03(T).
e.	OAC rule 3745-18-06(G)	SO_2 emissions shall not exceed 0.5 pounds of sulfur dioxide per MM Btu actual heat input. This emission limitation is less stringent than the limitation listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the Sate Implementation Plan.
f.	OAC rule 3745-17-11(B)(5)(b)	Particulate emissions (PE) shall not exceed 0.062 pound/million Btu actual heat input.
g.	OAC rule 3745-17-07(A)(1)	Visible PE from any stack serving this emission unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
h.	40 CFR Part 60, Subpart JJJJ (40 CFR 60.4230-4248)	**When burning digester gas:** NOxemissions shall not exceed 2.0

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 40 CFR Part 60.4233(e) and 40 CFR 60, Subpart JJJJ, Table 1., this emissions unit is a 1475 HP, lean burn, digester gas stationary spark internal combustion engine using natural gas as a backup fuel and is subject to the emissions limitations/controls measures specified in this section.]	g/HP-hr, CO emissions shall not exceed 5.0 g/HP-hr, VOC emissions shall not exceed 1.0 g/HP-hr. [ALTERNATIVE EMISSIONS LIMITATIONS FOR ENGINES NOT CERTIFIED IN ACCORDANCE WITH 40 CFR 60 SUBPART JJJJ ONLY: NOx emissions shall not exceed 150 ppmvd at 15% O_2, CO emissions shall not exceed 610 ppmvd at 15% O_2, VOC emissions shall not exceed 80 ppmvd at 15% O_2.] **When burning natural gas:** NOxemissions shall not exceed 1.0 g/HP-hr, CO emissions shall not exceed 2.0 g/HP-hr, VOC emissions shall not exceed 0.7 g/HP-hr. [ALTERNATIVE EMISSIONS LIMITATIONS FOR ENGINES NOT CERTIFIED IN ACCORDANCE WITH 40 CFR 60 SUBPART JJJJ ONLY: NOx emissions shall not exceed 82 ppmvd at 15% O_2, CO emissions shall not exceed 270 ppmvd at 15% O_2, VOC emissions shall not exceed 60 ppmvd at 15% O_2.] see b)(2)c and b)(2)d.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
i.	40 CFR 60.1 – 19 (40 CFR 60.4246)	Table 3 to Subpart JJJJ of 40 CFR Part 60 – Applicability of Subpart A to Subpart JJJJ shows which parts of the General Provisions in 40 CFR 60.1-19 apply.

(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 PM_{10}, emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.

c. The spark ignition (SI) internal combustion engine is subject to and shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart JJJJ, the standards of performance for stationary spark ignition, internal combustion engines. The engine shall be certified by the manufacturer to meet the applicable limits of 40 CFR 60.4231.

If the engine was not certified at the factory, the emission standard for the "owner/operator" should be referenced as from 60.4233(e).

d. The permittee shall comply with the applicable requirements under 40 CFR Part 60, Subpart JJJJ, including the following sections.

60.4233(e)	Emission standards

60.4243(b)	Demonstrate compliance

c) Operational Restrictions

(1) The permittee shall burn only natural gas, or digester gas with a minimum heat content of 500 Btu / scf, in this emissions unit.

(2) Digester gas combusted in this emissions unit shall not exceed 500 parts per million on a volume basis (ppm_v) of hydrogen sulfide.

(3) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subpart JJJJ, including the following sections:

60.4243(g)	Emissions controls – three-way catalyst and air-fuel ratio controllers

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation firing digester gas and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

The permittee may, upon receipt of written approval from Ohio EPA Central District Office, modify the above-mentioned frequencies for performing the visible emissions checks if operating experience indicates that less frequent visible emissions checks would be sufficient to ensure compliance with the above-mentioned applicable requirements.

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

(3) The permittee shall maintain monthly records of the natural gas and digester gas fuel usage in this unit in millions ofstandard cubic feet (mmSCF).

(4) The permittee shall maintain daily records of the average sulfur concentration (as H_2S) in ppm_v of the digester gas combusted in this emissions unit.

a. The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR Part 60, Subpart JJJJ, including the following sections.

60.4243(e)	Emergency operations, special record keeping
60.4245(a)	Record keeping requirements

(5) 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 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 permit to install.

(6) The permittee shall monitor and record hydrogen sulfide concentrations when operating the emissions unit with digester gas using one of the two following options:

<u>Option 1:</u> 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.

<u>Option 2:</u> Continuous digester gas monitoring system. The permittee may install a sampling and analysis system to continuously monitor and record the H_2S content of the digester gas. The permittee shall properly install, operate, and maintain a continuous

digester gas H_2S monitoring device and recorder that measures and records the H_2S concentrations in the digester gas when the emissions unit is in operation, including periods of startup and shutdown. The H_2S 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_2S concentration. The H_2S 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:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the 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:

a. a description of the corrective action;

b. the date the corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. hydrogen sulfide readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

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

(7) The permittee shall maintain monthly records of the heat content of the digester gas, in Btu / scf.

(8) The permittee shall perform a preventative maintenance inspection of the catalytic converter on an annual basis to evaluate the performance of the catalyst. Each inspection shall consist of internal and visual inspections in accordance with the manufacturer's recommendations, and shall include a physical inspection of the unit and all of the associated equipment, including but not limited to controls, dampers, valves, and monitoring and recording equipment. Repair and replacement of equipment and the catalyst shall be performed as determined by the inspection. During each annual inspection a sample of the catalyst material shall be collected from the catalyst bed and used to perform a catalyst activity test. The permittee shall maintain a record of the results of each annual inspection and the results of each annual catalyst activity test.

The permittee shall also perform weekly inspections of the external integrity of the catalytic converter. Records shall be maintained of the inspections and the date(s) of catalyst replacement, and if only partial, the amount or percent of the total catalyst replaced

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.

(3) The permittee shall submit reports and such other notifications to the Ohio EPA as are required pursuant to 40 CFR Part 60, Subpart JJJJ, per the following sections:

60.4245(c)	Reporting requirements
60.4245(d)	Reporting requirements

These reports and other such notifications shall be submitted to the following addresses:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

and

Ohio EPA, Central District Office
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

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:

1.0 g/hp-hrNO_x when burning digester gas or natural gas

Applicable Compliance Method:

If required, compliance with the NOx emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 7E of 40 CFR Part 60, Appendix A.

b. Emissions Limitation:

2.2 g/hr-hp CO when burning digester gas

2.0 g/hp-hr CO when burning natural gas

Applicable Compliance Method:

If required, compliance with the CO emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.

c. Emission Limitation:

3.21 lbs/hr and 14.06 tons/yr SO_2 when burning digester gas

0.01 lb/hr and 0.02 ton/yr SO_2 when burning natural gas

Applicable Compliance Method:

The permittee shall demonstrate compliance with the digester gas emissions limitation through the required monitoring and recordkeeping in d), and using the following equation:

E = Gross output of engine (mmBtu/hr) * (10^6 Btu / 1 mmBtu) * (1 / digester gas heat content) * (H2S ppmv / 1,000,000) * 0.088 lb H2S/ft3 H2S * 1.88 lb SO2/lb H2S = SO2 lb/hr

Where:

E = SO2 emissions rate, lb / hr

Digester gas heat content = average heat content of digester gas in Btu/scf from d)(7).

H2S ppmv = average concentration of H2S in digester gas, from d)(4)

Compliance with the annual digester gas limitation shall be determined by multiplying the pounds per hour emissions rate by the actual annual operating hours, and then dividing by 2000 pounds per ton.

The permittee shall demonstrate compliance with the hourly SO_2natural gas emissions limitation by multiplying the emission factor of 0.000588 lbs/mmBtu (AP-42 section 3.2,table 3.2-2, 8/2000) by the maximum heat input of 9.7 mmBtu/hr.

Compliance with the annual SO_2 natural gas emissions limitation was determined by multiplying the hourly emissions rate by the actual annual natural gas operating hours, and dividing by 2,000 pounds/ton.

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.

d. <u>Emissions Limitation:</u>

2.27 lb/hr and 9.95 tons/yr of VOC when burning digester gas or natural gas

<u>Applicable Compliance Method:</u>

The hourly emissions limit was established by multiplying 0.7 g/BHP-hr, the emission limit specified in NSPS JJJJ, by 1,475 BHP, the power output rating of this unit, and by 0.0022 lb/g, to convert from grams to pounds.

The annual emission limitation was established by multiplying the hourly emission rate above by the maximum hours of operation, 8,760 hours/year, and dividing by 2,000 pounds/ton.

If required, compliance with the VOC emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1 - 4, and 25, or 25A, as applicable, of 40 CFR, Part 60, Appendix A.

e. <u>Emissions Limitation:</u>

0.06 lb/hr and 0.26 ton/yr PM10 when burning digester gas

0.01 lb/hr and 0.01 ton/yr PM10 when burning natural gas

Applicable Compliance Method:

The hourly digester gas PM_{10}emissions limitation was determined by multiplying the emissions factor (0.006 lb/mmBtu, provided by the permittee) by the maximum input capacity of 9.7 mmBtu/hr.

The hourly natural gas PM_{10} emissions limitation was determined by multiplying the AP-42 emission factor of 0.0000771 lb/MMbtu (AP-42 Table 3.2-2, 8/2000) by maximum input capacity of 9.7 mmBtu/hr.

The annual PM_{10}emission limitation was determined by multiplying the hourly emission rate above by the maximum hours of operation, 8,760 hours/year, and dividing by 2,000 pounds/ton.

If required, compliance with the PM_{10} emissions limitation shall be determined in accordance with U.S. EPA Reference Methods 201/201A, and 202 as set forth in 40 CFR Part 51, Appendix M.

f. Emissions Limitation:

Sulfur dioxide (SO2) emissions shall not exceed 3.21 pounds per hour and 14.06 tons per year.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the emissions limitation through the required monitoring and recordkeeping in d)(6) and using the following equation:

E = Gross output of engine (mmBtu/hr) * (10^6 Btu / 1 mmBtu) * (1 / digester gas heat content) * (H2S ppmv / 1,000,000) * 0.088 lb H2S/ft3 H2S * 1.88 lb SO2/lb H2S = SO2 lb/hr

Where:

E = SO2 emissions rate, lb / hr

Digester gas heat content = average heat content of digester gas in Btu/scf from d)(4).

H2S ppmv = average concentration of H2S in digester gas, from d)(6)

Compliance with the annual limitation shall be determined by multiplying the pounds per hour emissions rate by the actual annual operating hours, and then dividing by 2000 pounds per ton.

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.

g. Emissions Limitation:

Particulate emissions shall not exceed 0.062 pounds per million BTU actual heat input

Applicable Compliance Method:

If required, compliance with the particulate emissions limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 5, as applicable, of 40 CFR Part 60, Appendix A.

h. Emissions Limitation:

SO_2 emissions shall not exceed 0.5 pounds of sulfur dioxide per MM Btu actual heat input.

Applicable Compliance Method:

If required, compliance with the sulfur dioxide emissions limitation shall be determined in accordance with U.S. EPA Reference Methods 1 - 4, and 6, as applicable, of 40 CFR 60, Appendix A.

i. Emissions Limitation:

Visible particulate emissions shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.

j. Emissions Limitations:

When burning digester gas, NOx emissions shall not exceed 2.0 g/HP-hr, and 150 ppmvd at 15% O_2.

When burning natural gas, NOx emissions shall not exceed 1.0 g/HP-hr, and 82 ppmvd at 15% O_2.

Applicable Compliance Method:

If required, NOx emissions shall be determined according to USEPA test Methods 1 - 4, 7E and 320.

k. Emissions Limitations:

When burning digester gas, CO emissions shall not exceed 5.0 g/HP-hr, and 610 ppmvd at 15% O_2.

When burning natural gas, CO emissions shall not exceed 2.0 g/HP-hr, and 270 ppmvd at 15% O_2.

Applicable Compliance Method:

If required, CO emissions shall be determined according to USEPA test Methods 1 - 4, 10, and 320.

l. Emissions Limitations:

When burning digester gas, VOC emissions shall not exceed 1.0 g/HP-hr, and 80 ppmvd at 15% O_2.

When burning natural gas, VOC emissions shall not exceed 0.7 g/HP-hr, and 60 ppmvd at 15% O_2.

Applicable Compliance Method:

If required, VOC emissions shall be determined according to USEPA test Methods 1 or 1A, 2 or 19, 3, 3A or 3B, 4, 18, 25, 25A and/or 320.

g) Miscellaneous Requirements

(1) None.

2. P001, Anaerobic digester

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)h. and b)(1)i.

(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
	Material Handling and Processing	
a.	OAC rule 3745-31-05(F) [Voluntary restriction to control odors]	See b)(2)a.
	Process Flare	
b.	ORC 3704.03(T)	Emissions of sulfur dioxide (SO_2) shall not exceed 3.0 pounds per hour and 13.1 tons per year. Emissions of carbon monoxide (CO) shall not exceed 0.37 pound per million Btu. Emissions of volatile organic compound (VOC) shall not exceed 0.14 pound per million Btu.
c.	OAC rule 3745-31-05(A)(3), as effective 11/30/2011	Emissions of oxides of nitrogen shall not exceed 1.35 pound per hour and 5.90 tons per year.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Emissions of particulate matter 10 microns in diameter or less shall not exceed 0.22 pound per hour and 0.95 ton per year. See b)(2)b. and b)(2)c.
d.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/2006	See b)(2)d.
e.	OAC rule 3745-17-11(B)	See b)(2)e.
f.	OAC rule 3745-17-07(A)	See b)(2)f.
g.	OAC rule 3745-18-06(E)(2)	The sulfur dioxide (SO_2)emissions limitation specified by this rule is less stringent than the voluntary restriction established pursuant to ORC 3704.03(T) in b)(1)b.
	Biofilter	
h.	OAC rule 3745-31-05(E) [State-only enforceable restriction to ensure compliance with ORC 3704.03(F)(4)(b) (Toxic Air Contaminant Statute)]	See d)(3).
i.	ORC 3704.03(F)(4)(b)	See d)(2).
j.	OAC rule 3745-31-05(F) [Voluntary restriction to control odors]	See b)(2)a.

(2) Additional Terms and Conditions

a. Permit to install and operate P0109080 for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of controlling odors from material handling and processing:

i. Daily cleaning of the processing building load-in and load-out areas to minimize the presence of residual feedstock and digestate;

ii. Installation and operation of a biofilter to control emissions of odors from material handling and processing operations; and

iii. Headspace from storage tanks, including liquid feedstock buffer tanks, pasteurization tanks and belt press filtrate holding tank shall be vented through a closed-vent system exhausted through a biofilter.

b. Biogas combusted in the flare shall not exceed a hydrogen sulfide (H_2S) concentration of 500 parts per million on a volume basis (ppm_v).

c. 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.

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to nitrogen oxides (NO_x) and particulate emissions (PM10), from this air contaminant source since the uncontrolled potential to emit for NO_x, and PM10 are less than 10 tons/yr.

e. The uncontrolled mass rate of particulate emissions (PE) from this emissions unit is less than 10 pounds/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 process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(17).

f. 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.

g. Emissions from P001 shall be vented to the flare during any instance during which biogas is present in the feedstock equilibrium tank, primary digester, or dual purpose tank and emissions unit B001 is not firing biogas.

c) Operational Restrictions

(1) A pilot flame shall be maintained at all times in the flare's pilot light burner.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain the following records on a daily basis:

a. all periods of time during which there was no pilot flame or the flare was inoperable and biogas was present in the feedstock equilibrium tank, primary digester, or dual purpose tank and emissions unit B001 is not operating;

b. all periods of time that the voluntary restrictions in b)(2)a. are not employed or followed; and

c. the average sulfur concentration (as H_2S) in ppm_v of the biogas combusted in the flare.

(2) 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 so long as the permittee complies with the voluntary restrictions in b)(2)a and the monitoring and recordkeeping requirements in d)(3).

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install 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 permit to install.

(3) The permittee shall submit an operation and maintenance plan (or "plan") for biofilter operation to Ohio EPA, Central District Office for approval within sixty (60) days of startup of emissions unit P001. This plan shall be implemented and followed immediately upon startup of the emissions unit and, at a minimum, include the following information:

a. a description of the biofilter, including materials of construction and key operating parameter value(s) or range(s);

b. a description of how the biofilter will be operated and maintained, including a schedule for routine biofilter maintenance and material replacement, equipment specifications of the biofilter odorous air blower, and dimensions and location of the biofilter;

c. a description of how biofilter key operating parameters will be monitored and corrective actions performed if any key operating parameter(s) fall outside its (their) expected value(s) or range(s);

d. a description of any periodic sampling or testing performed on the biofilter or biofilter emissions for odor-causing compounds;

e. a description of how biofilter emissions will be monitored for odor-causing compounds at the biofilter and at the facility fenceline;

f. a description of how odor-causing compound emissions from the biofilter, detected at the facility fenceline, will be minimized or eliminated; and

g. a description of how biofilter malfunctions, including emissions of odor-causing compounds detected at the facility fenceline, will be reported to Central District Office.

Until such time as Ohio EPA, Central District Office (CDO) approves the plan, the original plan shall be implemented and followed as submitted. If the submitted plan is not acceptable, the facility shall continue to implement the submitted plan and submit any necessary changes or revisions until the it is approved by CDO.

After initial approval of the plan, any changes or revisions shall be submitted to CDO for approval prior to implementing the change or revision. Until such time as any changes or revisions to the plan are approved, the facility shall continue to comply with the existing, approved plan.

Upon request, the facility shall submit an updated and augmented plan if Ohio EPA determines that the current plan is not adequate for controlling emissions of odor-causing compounds. This updated planshall be submitted within thirty (30) days of receiving the request, or such time as requested by the permittee and approved by Ohio EPA. If the submitted augmented plan is not acceptable, the facility shall continue to implement the submitted augmented plan and submit any necessary changes or revisions until the plan is approved by CDO.

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. <u>Emissions Limitation:</u>

Emissions of sulfur dioxide (SO_2) shall not exceed 3.0 pounds per hour and 13.1 tons per year.

<u>Applicable Compliance Method:</u>

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

SO_2lb/hr = F * (H_2S ppm_v / 1,000,000) * 0.88 lb H_2S/ft^3 H_2S * 1.88 lb SO_2/lb H_2S

Where:

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

H_2S ppm_v = average concentration of H_2S in biogas, from d)(1)

Compliance with the annual emissions limitation shall be demonstrated by multiplying the calculated SO_2lb/hr by 8,760 hours per year and dividing by 2,000 pounds per ton.

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 USEPA 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 USEPA 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 1.35 lb/hr and 5.90 ton/yr

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by multiplying the emission factor of 0.068 lb/mmBtu (AP-42 Table 13.5-1, September 1991) by the rated capacity of the flare (19.8 mmBtu/hr).

Compliance with annual emission limitation shall be demonstrated by multiplying the hourly emission limitation by 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 0.22 lb/hr and 0.95 ton/yr

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by multiplying the emission factor of 0.011 lb/mmBtu (AP-42 Table 13.5-1, September 1991) by the rated capacity of the flare (19.8 mmBtu/hr).

Compliance with annual emission limitation shall be demonstrated by multiplying the hourly emission limitation by 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) If required, the permittee shall confirm, through the applicable methods and procedures specified in 40 CFR Part 60.18, that the flare's exit velocity and the net heating value of the biogas conform to the maximum design values specified in the permit application for this emissions unit.

(2) 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.