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

5/21/2013

Certified Mail

Mr. Bruce Bailey
Collinwood BioEnergy, LLC
7624 Riverview Road
Cleveland, OH 44141

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 1318008759
Permit Number: P0114300
Permit Type: OAC Chapter 3745-31 Modification
County: Cuyahoga

Dear Permit Holder:

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

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

**How to appeal this permit**

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

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

**How to save money, reduce pollution and reduce energy consumption**

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

**How to give us feedback on your permitting experience**

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

**How to get an electronic copy of your permit**

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

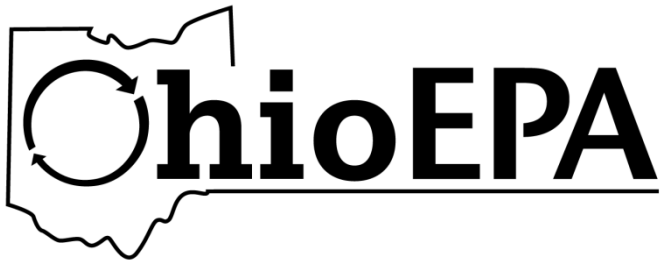
If you have any questions, please contact Cleveland Division of Air Quality at (216)664-2297or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

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

Cc: CDAQ




# FINAL

# Division of Air Pollution Control
# Permit-to-Install and Operate
for
Collinwood BioEnergy, LLC

| | |
|---|---|
| Facility ID: | 1318008759 |
| Permit Number: | P0114300 |
| Permit Type: | OAC Chapter 3745-31 Modification |
| Issued: | 5/21/2013 |
| Effective: | 5/21/2013 |
| Expiration: | 9/15/2021 |

**Division of Air Pollution Control**
**Permit-to-Install and Operate**
for
Collinwood BioEnergy, LLC

**Table of Contents**

# Authorization

Facility ID: 1318008759
Application Number(s): A0047622
Permit Number: P0114300
Permit Description: Chapter 31 Modification for F001 due to an increase in vehicle miles travelled. The only unit being modified in this permit that results in an emissions increase is F001. Some minor adjustments have been made for B001, B002, B003, and P001. This includes the addition of a second digester for P001 which does not result in an emissions increase due to the batch operation of the system. All these units were previously permitted in P0107748 issued on 9/15/2011. These units are included in this permit for consistency purposes.
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: $200.00
Issue Date: 5/21/2013
Effective Date: 5/21/2013
Expiration Date: 9/15/2021
Permit Evaluation Report (PER) Annual Date: Apr 1 - Mar 31, Due May 15

This document constitutes issuance to:

Collinwood BioEnergy, LLC
13500 Aspinwall Avenue
Cleveland, OH 44141

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

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

Cleveland Division of Air Quality
2nd Floor
75 Erieview Plaza
Cleveland, OH 44114
(216)664-2297

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: P0114300
Permit Description: Chapter 31 Modification for F001 due to an increase in vehicle miles travelled. The only unit being modified in this permit that results in an emissions increase is F001. Some minor adjustments have been made for B001, B002, B003, and P001. This includes the addition of a second digester for P001 which does not result in an emissions increase due to the batch operation of the system. All these units were previously permitted in P0107748 issued on 9/15/2011. These units are included in this permit for consistency purposes.

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

| **Emissions Unit ID:** | **F001** |
|---|---|
| Company Equipment ID: | Roadways and Parking Areas |
| Superseded Permit Number: | P0107748 |
| 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 takenby 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 Cleveland Division of Air Quality 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) B.2.

2. The following emissions units contained in this permit are subject to 40 CFR Part 60, Subpart JJJJ, Standards of Performance for New Stationary Sources: B001 and B002. The complete NSPS requirements, including the Subpart A General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website at http://ecfr.gpoaccess.gov or by contacting the Cleveland Division of Air Quality (CDAQ).

   The permittee must comply with all applicable requirements of 40 CFR Part 60, Subpart JJJJ. The permittee shall also comply with all applicable requirements of 40 CFR Part 60, Subpart A (General Provisions) as identified in Table 3 of 40 CFR Part 60, Subpart JJJJ. Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR Part 60, Subpart JJJJ, and Subpart A.

# C. Emissions Unit Terms and Conditions

**1. B001, CHPU Unit 1**

**Operations, Property and/or Equipment Description:**

9.7 MM BTU, 1475 HP generator fired by natural gas and digester gas.

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. d)(6).

(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 operations(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. 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. | Ohio Revised Code (ORC) 3704.03(T) | Emissions of nitrogen oxides (NOx) shall not exceed 1.0 g/hp-hr (gram per horsepower–hour).<br>Emissions of carbon monoxide (CO) shall not exceed 3.0 g/hp-hr.<br>Emissions of sulfur dioxide ($SO_2$) shall not exceed 3.0 lb/hr and 13.1 tons/yr.<br>See c)(1). |
| b. | OAC rule 3745-31-05(A)(3), as effective 11/30/2001. | Particulate emissions (PE) shall not exceed 0.062 lbs/MMBtu and 2.63 tons/yr.<br>Emissions of volatile organic compounds (VOC) shall not exceed 0.7 g/hp-hr and 9.95 tons/yr. |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | | The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).<br>See b)(2)a. |
| c. | OAC rule 3745-31-05(A)(3), as effective 12/1/2006. | See b)(2)b. |
| d. | OAC rule 3745-17-07(A)(1) | Visible PE from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| e. | OAC rule 3745-17-11(B)(5)(b) | Particulate emissions shall not exceed 0.062 pound/million Btu actual heat input.<br>See b)(2)e. |
| f. | OAC rule 3745-18-06(G) | Exempt, pursuant to OAC rule 3745-18-06(B).<br>Heat input rated capacity equal to or less than 10 million Btu per hour. |
| g. | 40 CFR Part 60, Subpart JJJJ<br>[In accordance with 40 CFR 60.4230(a)(4)(i), this emissions unit is a spark ignition engine greater than or equal to 500 horsepower (HP)] | The NOx emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to ORC 3704.03(T).<br>The CO emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to ORC rule 3704.03(T).<br>VOC emissions shall not exceed 1.0g/hp-hr or 80 ppm at 15% $O_2$.<br>See b)(2)c, b)(2)d and b)(2)e. |
| h. | 40 CFR 60.1 – 19<br>(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. |

| | | |
|---|---|---|
| i. | 40 CFR 63 Subpart ZZZZ<br>40 CFR 63.6590(c)(1) | A new reconstructed area source operating in compliance with Part 60 Subpart JJJJ is the demonstrations of compliance for 40 CFR 63 Subpart ZZZZ. |

(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 $SO_2$, VOC and $PM_{10}$, emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year taking into account the legally and practically enforceable operational restrictions established in c)(1).

c. The spark ignition (SI) internal combustion engine (ICE) 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 SI ICE.

d. The stationary SI ICE has been or shall be purchased certified by the manufacturer to emission standards as stringent as those identified in 40 CFR 60.4233(e) and found in Table 1 of Part 60, Subpart JJJJ for engines greater than or equal to 1,350 HP and manufactured on or after 7/7/10.

e. Until such time the U.S. EPA approves the revision to OAC rule 3745-31-05, the more stringent or equivalent particulate emissions and VOC limits established under OAC rule 3745-31-05(A)(3) shall apply. Upon U.S. EPA approval of the

revisions to OAC rule 3745-31-05, the rule based limits under 3745-17-11(B) and 40 CFR 60 Subpart JJJJ shall go into effect.

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 once a steady system is established in the digester, but not later than six months after seed sludge is initially introduced into the digester. During the commissioning phase the digester gas combusted in this emissions unit shall not exceed 1000 $ppm_V$ of hydrogen sulfide.

The commissioning phase is the period of time once seed sludge is introduced into the digester until a steady system is established that can be fed the design-case feedstock load on a daily basis.

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

| | |
|---|---|
| 60.4234 | Operating and maintaining the unit to achieve the emission standards over the entire life of the unit. |
| 60.4243(b) | Demonstrate compliance |
| 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 Cleveland Division of Air Quality, 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 of standard cubic feet (MMSCF).

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

(5) 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 $H_2S$ 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:

f. a description of the corrective action;

g. the date the corrective action was completed;

h. the date and time the deviation ended;

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

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

k. 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.

(6) 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.

(7) 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 |
| Table 3 to §60.4246 | Applicability of General Provisions |

e) Reporting Requirements

(1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

(2) 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 for initial notifications |
| 60.4245(d) | Reporting requirements for performance testing |

f) Testing Requirements

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

a. Emissions Limitation:
1.0 g/hp-hr$NO_x$

Applicable Compliance Method:
This limit was established by using the emission factor provided by the manufacturer, Guascor Power.

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:
3.0 g/hp-hr CO

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. Emissions Limitation:

0.062 pound particulate emissions 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.

d. Emissions Limitation:
2.63 tons/yr PE

Applicable Compliance Method:
Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

e. Emissions Limitation:
2.92 lb/hr $SO_2$

Applicable Compliance Method:
The permittee shall demonstrate compliance with the emissions limitation through the required monitoring and recordkeeping in d)(5) and using the following equation:

E = Gross output of engine (mmBtu/hr) * ($10^6$ Btu / 1 mmBtu) * (1 / digester gas heat content) * ($H_2S$ $ppm_v$ / 1,000,000) * 0.088 lb $H_2S/ft^3$ $H_2S$ * 1.88 lb $SO_2$/lb $H_2S$ = $SO_2$lb/hr

Where:

E = $SO_2$ emissions rate, lb / hr

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

$H_2S$ $ppm_v$ = average concentration of $H_2S$ in digester gas, from d)(5)

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.

f. Emissions Limitation:
2.54 tons/yr $SO_2$

Applicable Compliance Method:
Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

g. Emissions Limitation:
0.7 g/hp-hr VOC

Applicable Compliance Method:
This limit was established by using the emission factor provided by the manufacturer, Guascor Power.
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.

h. 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.

i. Emissions Limitation:
1.0 g/hp-hr VOC

Applicable Compliance Method:
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.

(2) The permittee shall conduct performance tests as required pursuant to 40 CFR Part 60, Subpart JJJJ, per the following section

| | |
|---|---|
| 60.4244 | Performance testing requirements according to §60.4243(b)(2). |

g) Miscellaneous Requirements

(1) None.

**2. B002, CHPU Unit 2**

**Operations, Property and/or Equipment Description:**

6.3 MM BTU, 939 HP generator fired by natural gas and digester gas.

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. d)(7).

(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 operations(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. 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. | Ohio Revised Code (ORC) 3704.03(T) | Emissions of carbon monoxide (CO) shall not exceed 3.0 g/hp-hr.<br>See c)(1). |
| b. | OAC rule 3745-31-05(A)(3), as effective 11/30/2001 | Emissions of nitrogen oxides (NOx) shall not exceed 1.0 g/hp-hr (gram per horsepower–hour) and 5.28 tons/year.<br>Emissions of volatile organic compounds (VOC) shall not exceed 1.0 g/hp-hr and 5.28 tons/year.<br>Particulate emissions shall not exceed 0.062 lb/mmBtu and 1 ton/year.<br>Emissions of sulfur dioxide shall not exceed 2.1 lb/hr and 9.13 tons/year.<br>The emissions limitations specified in |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | | accordance with this rule are equivalent to or more stringent than the requirements of OAC rule 3745-18-06 and OAC rule 3745-17-11(B).<br>See b)(2)a. |
| c. | OAC rule 3745-31-05(A)(3)(b), as effective 12/1/2006 | See b)(2)b. |
| d. | OAC rule 3745-31-05(F) | Emissions of nitrogen oxides (NOx) shall not exceed 1.0 g/hp-hr (gram per horsepower–hour) and 5.28 tons/year |
| e. | OAC rule 3745-17-07(A)(1) | Visible PE from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.<br>See b)(2)e. |
| f. | OAC rule 3745-17-11(B)(5)(b) | Particulate emissions shall not exceed 0.062 pound per million Btu actual heat input.<br>See b)(2)e. |
| g. | OAC rule 3745-18-06(G) | Exempt, pursuant to OAC rule 3745-18-06(B).<br><br>Heat input rated capacity equal to or less than 10 million Btu per hour. |
| h. | 40 CFR Part 60, Subpart JJJJ<br>[In accordance with 40 CFR 60.4230(a)(4)(i), this emissions unit is a spark ignition engine greater than or equal to 500 horsepower (HP)] | The NOx emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC Rule 3745-31-05(F).<br>The CO emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to ORC rule 3704.03(T).<br>VOC emissions shall not exceed 1.0 g/hp-hr or 80 ppm at 15% $O_2$.<br>see b)(2)c. and b)(2)d. |

| | | |
|---|---|---|
| i. | 40 CFR 60.1 – 19<br>(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. |
| j. | 40 CFR Part 63 Subpart ZZZZ<br>40 CFR 63.6590(c)(1) | A new or reconstructed area source operating in compliance with Part 60 Subpart JJJJ is the demonstrations of compliance for 40 CFR 63 Subpart ZZZZ. |

(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 VOC, $SO_2$ and $PM_{10}$ emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year taking into account the legally and practically enforceable operational restrictions established in c)(1).

Permit to Install P0107748 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 avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) for NOx and VOC:

i. Maximum annual operating hours for this emissions unit shall not exceed 5110 hours.

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 SI ICE.

d. The stationary SI ICE has been or shall be purchased certified by the manufacturer to emission standards as stringent as those identified in 40 CFR 60.4233(e) and found in Table 1 of Part 60, Subpart JJJJ for engines greater than or equal to 500 HP and less than 1,350 HP and manufactured on or after 7/1/10.

e. Until such time the U.S. EPA approves the revision to OAC rule 3745-31-05, the more stringent or equivalent particulate emissions limits established under OAC rule 3745-31-05(A)(3) shall apply. Upon U.S. EPA approval of the revisions to OAC rule 3745-31-05, the rule based limits under 3745-17-11(B) shall go into effect.

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 once a steady system is established in the digester, but not later than six months after seed sludge is initially introduced into the digester. During the commissioning phase the digester gas combusted in this emissions unit shall not exceed 1000 $ppm_V$ of hydrogen sulfide.

The commissioning phase is the period of time once seed sludge is introduced into the digester until a steady system is established that can be fed the design-case feedstock load on a daily basis.

(3) The maximum annual operating hours for this emissions unit shall not exceed 5110 hours.

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

| | |
|---|---|
| 60.4234 | Operating and maintaining the unit to achieve the emission standards over the entire life of the unit. |
| 60.4243 | Emissions controls – three-way catalyst and air-fuel ratio controllers |
| 60.4243(b) | Demonstrate compliance |

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 Cleveland Division of Air Quality, 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 of standard cubic feet (MMSCF).

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

(5) The permittee shall maintain monthly records of the operating hours for this emissions unit.

(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:

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 $H_2S$ 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:

f. a description of the corrective action;

g. the date the corrective action was completed;

h. the date and time the deviation ended;

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

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

k. 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) 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.

(8) 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 |
| Table 3 to §60.4246 | Applicability of General Provisions |

e) Reporting Requirements

(1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

(2) 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 for initial notifications |
| 60.4245(d) | Reporting requirements for performance testing |

f) Testing Requirements

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

a. Emissions Limitation:
1.0 g/hp-hr$NO_x$

Applicable Compliance Method:
This limit was established by using the emission factor provided by the manufacturer, Guascor Power.

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:
5.28 tons/yr$NO_x$

Applicable Compliance Method:
Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

c. Emissions Limitation:
2.0 g/hp-hr CO

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.

d. Emissions Limitation:
1.0 g/hp-hr VOC

Applicable Compliance Method:
This limit was established by using the emission factor provided by the manufacturer, Guascor Power.

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. Emissions Limitation:
5.28 tons/yr VOC

Applicable Compliance Method:
Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

f. Emissions Limitation:
0.062 pound particulate emissions 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.

g. Emissions Limitation:
1 ton/yr PE

Applicable Compliance Method:
If required, compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

h. Emissions Limitation:
2.1 lb/hr $SO_2$

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) * ($H_2S$ $ppm_v$ / 1,000,000) * 0.088 lb $H_2S/ft^3$ $H_2S$ * 1.88 lb $SO_2$/lb $H_2S$ = $SO_2$lb/hr

Where:

E = $SO_2$ emissions rate, lb / hr

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

$H_2S$ $ppm_v$ = average concentration of $H_2S$ in digester gas, from d)(6)

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.

i. Emissions Limitation:
9.13 tons/yr $SO_2$

Applicable Compliance Method:
Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

j. 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.

k. Emissions Limitation:
0.5 pound $SO_2$ emissions per million BTU actual heat input

Applicable Compliance Method:
If required, compliance with the $SO_2$ emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.

(2) The permittee shall conduct performance tests as required pursuant to 40 CFR Part 60, Subpart JJJJ, per the following section

| | |
|---|---|
| 60.4244 | Performance testing requirements according to §60.4243(b)(2). |

g) Miscellaneous Requirements

(1) None.

**3. B003, Boiler Unit 1**

**Operations, Property and/or Equipment Description:**

1.6 MM BTU/hour Biogas and Natural Gas Boiler

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 operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| a. | OAC rule 3745-31-05(A)(3), as effective 11/30/2001 | Emissions of nitrogen oxides ($NO_x$) shall not exceed 0.35 lb/hr and 1.55 tons per year when firing digester gas.<br>Emissions of carbon monoxide (CO) shall not exceed 0.11 lb/hr and 0.47 ton per year when firing digester gas.<br>The requirements of this rule also include compliance with OAC rule 3745-17-07(A) and OAC rule 3745-17-10(B)(1).<br>See b)(2)a. |
| b. | OAC rule 3745-31-05(b), as effective 12/1/2006 | See b)(2)b and c)(1). |
| c. | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from the stack serving this emissions unit shall not |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | | exceed 20% opacity as a six-minute average, except as provided by rule. |
| d. | OAC rule 3745-17-10(B)(1) | Emissions shall not exceed 0.020 pound particulate emissions per million BTU actual heat input. |
| e. | OAC rule 3745-18-06 | See b)(2)c. |

(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 $NO_x$, CO or PM, emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year taking into account the legally and practically enforceable operational restrictions established in c)(1).

c. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(D) pursuant to OAC rule 3745-18-06(B).

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.

d) Monitoring and/or Recordkeeping Requirements

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

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

e) Reporting Requirements

(1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

f) Testing Requirements

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

a. Emissions Limitation:
0.35 lb/hr$NO_x$

Applicable Compliance Method:
This limit was established by using the emission factor provided by the manufacturer, Bryan Steam, LLC.

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

b. Emissions Limitation:
1.55 tons/yr$NO_x$

Applicable Compliance Method:
Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

c. Emissions Limitation:
0.11 pound lb/hr CO

Applicable Compliance Method:
This limit was established by using the emission factor provided by the manufacturer, Bryan Steam, LLC.

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.

d. Emissions Limitation:
0.47 ton/yr CO

Applicable Compliance Method:
Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

e. 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.

f. Emissions Limitation:
0.020 pound particulate emissions 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.

g) Miscellaneous Requirements

(1) None.

## 4. F001, Roadways and Parking Areas

**Operations, Property and/or Equipment Description:**

Paved Roadways and Parking Areas

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| a. | OAC rule 3745-31-05(A)(3), as effective 11/30/01. | $PM_{10}$ shall not exceed 1.84 tons/year.<br>No visible emissions of fugitive dust except for one minute during any 60-minute period<br>See b)(2)a. |
| b. | OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06. | See b)(2)b. |
| c. | OAC rule 3745-31-05(F) | See b)(2)c. |
| d. | OAC rule 3745-17-07(B)(4) | There shall be no visible particulate emissions from any paved roadway or parking area except for a period of time not to exceed six minutes during any 60-minute observation period. |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | | See b)(2)i. |
| e. | OAC rule 3745-17-08(B) | See b)(2)d. through b)(2)h. |

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to 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 ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutant 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 3745-31-05, then these emissions limits/control measure 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.

c. Permit to Install and Operate (PTIO) P0107748 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 avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

i. Vehicle miles traveled shall be limited to 1400 miles per year.

d. The permittee shall employ reasonably available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to treat the paved roadways and parking areas by application of chemical stabilization/dust suppressants and/or watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

e. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for paved roadways and parking areas that are covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control

measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

f. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.

g. Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

h. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-17-08.

i. Until such time the U.S. EPA approves the revision to OAC rule 3745-31-05, the more stringent or equivalent visible emissions limits established under OAC rule 3745-31-05(A)(3) shall apply. Upon U.S. EPA approval of the revisions to OAC rule 3745-31-05, the rule based limits under OAC rule 3745-17-07(A) shall go into effect.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of the following information in a readily accessible location for at least five years and shall make these records available to the Cleveland Division of Air Quality (CDAQ) upon verbal or written request.

a. Total vehicle miles traveled per year.

(2) Except as otherwise provided in this section, the permittee shall perform inspections of each of the roadway segments and parking areas in accordance with the following frequencies:

| paved roadways and parking areas | minimum inspection frequency |
|---|---|
| all roads and parking areas | daily |

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

(4) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in d)(3)d. shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

(1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

f) Testing Requirements

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

a. Emission Limitations:
1.84 tons/year of $PM_{10}$

Applicable Compliance Method:
Compliance with fugitive $PM_{10}$ limitations shall be determined by using the emission factor equations in Section 13.2.1, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 01/11) for paved roadways. Should further updates in AP-42 occur, the most current equations for paved roads shall be used.

b. Emission Limitation:
No visible emissions of fugitive dust from paved roadways and parking areas except for a period of time not to exceed one minute during any 60-minute observation period.

Applicable Compliance Method:
If required, compliance with the visible PM limitation listed above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

c. Emission Limitation:
No visible emissions of fugitive dust from any paved roadway or parking area except for a period of time not to exceed six minutes during any 60-minute observation period.

Applicable Compliance Method:
If required, compliance with the visible PM limitation listed above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

(1) None.

**5. P001, Anaerobic Digester System Controlled by Flare**

**Operations, Property and/or Equipment Description:**

24 MM BTU Anaerobic Digester System with Flare Fueled by Biogas and Natural Gas

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 operations(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. 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) | Emissions of carbon monoxide (CO) shall not exceed 0.19 lb/MMBtu.<br>See c)(1) and c)(2). |
| b. | OAC rule 3745-31-05(A)(3), as effective 11/30/2001. | Emissions of sulfur dioxide ($SO_2$) shall not exceed 3.62 lbs/hr and 9.2 tons/year.<br>Emissions of nitrogen oxides ($NO_x$) shall not exceed 0.06 pounds per million Btu (lb/MMBtu) and 3.68 tons per year.<br>See b)(2)a. |
| c. | OAC rule 3745-31-05(A)(3)(b), as effective 12/1/2006. | See b)(2)b. |

| | | |
|---|---|---|
| d. | OAC rule 3745-17-11(B) | See b)(2)c. |
| e. | OAC rule 3745-17-07(B)(1) | See b)(2)d. |

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

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

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 $NO_x$ emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.

Permit to Install P0107748 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 avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) for SO2:

i. Maximum annual operating hours for this emissions unit shall not exceed 5110 hours.

c. 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 process weight rate is equal to zero. Process weight is defined in OAC rule 3745-17-01(B)(17).

d. 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.

c) Operational Restrictions

(1) Digester gas combusted in this emissions unit shall not exceed 500 parts per million on a volume basis ($ppm_v$) of hydrogen sulfide once a steady system is established in the digester, but not later than six months after seed sludge is initially introduced into the digester. During the commissioning phase the digester gas combusted in this emissions unit shall not exceed 1000 $ppm_V$ of hydrogen sulfide.

The commissioning phase is the period of time once seed sludge is introduced into the digester until a steady system is established that can be fed the design-case feedstock load on a daily basis.

(2) Digester gas combusted in the flare serving this emissions unit shall not be less than 500 Btu/scf.

(3) The maximum annual operating hours for this emissions unit shall not exceed 5110 hours.

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 $H_2S$ 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.

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

(3) The permittee shall maintain monthly records of the operating hours for this emissions unit.

e) Reporting Requirements

(1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-

Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

f) Testing Requirements

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

a. Emissions Limitation:
0.19 lb/MMBtu of CO

Applicable Compliance Method:
This limit was established by using the emission factor of 0.19 lb/MMBtu of CO provided by the manufacturer, Varec Biogas.

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.

b. Emissions Limitation:
3.62 lbs/hr $SO_2$

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

E = Gross output of engine (mmBtu/hr) * ($10^6$ Btu / 1 mmBtu) * (1 / digester gas heat content) * ($H_2S$ $ppm_v$ / 1,000,000) * 0.088 lb $H_2S/ft^3$ $H_2S$ * 1.88 lb $SO_2$/lb $H_2S$ = $SO_2$lb/hr

Where:

E = $SO_2$ emissions rate, lb/hr

Digester gas heat content = average heat content of digester gas in Btu/scf from d)(2).

$H_2S$ $ppm_v$ = average concentration of $H_2S$ in digester gas, 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.

c. Emissions Limitation:
9.2 tons/yr $SO_2$

Applicable Compliance Method:
Compliance with the annual limitations shall be determined by multiplying the lb/hr emissions rate by the actual annual operating hours, and then dividing by 2000 lbs/ton.

d. Emissions Limitation:
0.06 lb/MMBtu$NO_x$

Applicable Compliance Method:
This limit was established by using the emission factor of 0.06 lb/MMBtu of $NO_x$ provided by the manufacturer, Varec Biogas.

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.

e. Emissions Limitation:
3.68 tons/yr$NO_x$

Applicable Compliance Method:
Compliance with the annual limitations shall be determined by multiplying the hourly emissions rate (lb/MMBtu times MMbtu/hr) by the actual annual operating hours, and then dividing by 2000 lbs/ton.

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 digester gas conform to the maximum design values specified by the flare manufacturer.