



Environmental Protection Agency

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

4/19/2012

Mr. Bruce Bailey  
Wooster Renewable Energy, LLC  
7624 Riverview Road  
Cleveland, OH 44141

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE  
Facility ID: 0285032008  
Permit Number: P0109347  
Permit Type: Initial Installation  
County: Wayne

Certified Mail

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

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](http://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, Northeast District Office at (330)425-9171 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPCWeb page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc), by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: Ohio EPA-NEDO





**FINAL**

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

Facility ID:	0285032008
Permit Number:	P0109347
Permit Type:	Initial Installation
Issued:	4/19/2012
Effective:	4/19/2012
Expiration:	1/26/2022





Division of Air Pollution Control
Permit-to-Install and Operate
for
Wooster Renewable Energy, LLC

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## Authorization

Facility ID: 0285032008  
Application Number(s): A0043572  
Permit Number: P0109347  
Permit Description: Initial PTIO for 2 emergency flares, a natural gas/biogas generator and a natural gas/biogas boiler. The facility will be co-located with the City of Wooster's WWTP  
Permit Type: Initial Installation  
Permit Fee: \$1,400.00  
Issue Date: 4/19/2012  
Effective Date: 4/19/2012  
Expiration Date: 1/26/2022  
Permit Evaluation Report (PER) Annual Date: Oct 1 - Sept 30, Due Nov 15

This document constitutes issuance to:

Wooster Renewable Energy, LLC  
1123 Old Columbus Road  
Wooster, OH 44619

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

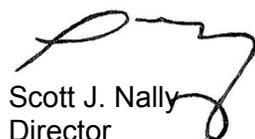
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 44087  
(330)425-9171

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: P0109347

Permit Description: Initial PTIO for 2 emergency flares, a natural gas/biogas generator and a natural gas/biogas boiler. The facility will be co-located with the City of Wooster's WWTP

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

<b>Emissions Unit ID:</b>	<b>B001</b>
Company Equipment ID:	CHPU 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

<b>Emissions Unit ID:</b>	<b>B002</b>
Company Equipment ID:	Boiler
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

**Group Name: Flares**

<b>Emissions Unit ID:</b>	<b>P001</b>
Company Equipment ID:	Flare 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P002</b>
Company Equipment ID:	Flare 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Final Permit-to-Install and Operate**

Wooster Renewable Energy, LLC

**Permit Number:** P0109347

**Facility ID:** 0285032008

**Effective Date:** 4/19/2012

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 unit contained in this permit is 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 Northeast District Office.
3. The Ohio EPA has determined that emission unit B001 at this facility is subject to the requirements of 40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines located at an area source. Although Ohio EPA has determined that this Generally Available Control Technology NESHAP (GACT) applies, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised, that all requirements associated with this rule are in effect and shall be enforced by U.S. EPA. For more information on the area source rules, please refer to the following U.S. EPA website: <http://www.epa.gov/ttn/atw/area/arearules.html>.

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

**1. B001, CHPU 1**

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

Combined Heat and Process Unit consisting of a 2,233 hp, reciprocating, 4-stroke, biogas/ natural gas, SI ICE powering a 1.3 MW generator

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)	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 1.0 g/hp-hr (gram per horsepower-hour).  Carbon monoxide (CO) emissions shall not exceed 2.5 g/hp-hr.  Volatile organic compound (VOC) emissions shall not exceed 0.84 g/hp-hr.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.13 lb/mmBtu and 9.5 tons/year.  See b)(2)b.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/1/2006	See b)(2)c.

**Final Permit-to-Install and Operate**

Wooster Renewable Energy, LLC

**Permit Number:** P0109347

**Facility ID:** 0285032008

**Effective Date:** 4/19/2012

d.	OAC rule 3745-31-05(E) (to restrict NO <sub>x</sub> emissions)	The combined NO <sub>x</sub> emissions from B001, B002, P001 and P002 shall not exceed 24.9 tons/year.
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
f.	OAC rule 3745-17-11(B)(5)(b)	Particulate emissions (PE) shall not exceed 0.062 lb/mmBtu of actual heat input.
g.	OAC rule 3745-18-06(G)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to ORC 3704.03(T)
h.	OAC rule 3745-110-03(F)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to ORC 3704.03(T)
i.	40 CFR Part 60, Subpart JJJJ [In accordance with 40 CFR 60.4230(a)(4)(i), this emissions unit is a spark ignition (SI) engine greater than 500 horsepower(hp).]	The emission limitations required by this applicable rule are less stringent than the emission limitations established pursuant to ORC 3704.03(T) and OAC rule 3745-31-05(E).  See b)(2)d.
j.	40 CFR 60.1-19 (40 CFR 62.4246)	Table 3 to Subpart JJJJ of 40 CFR Part 60 – Applicability of General Provisions to Subpart JJJJ shows which parts of the General Provisions in 40 CFR 60.1-19 apply.

(2) Additional Terms and Conditions

- a. The NO<sub>x</sub>, CO, VOC and SO<sub>2</sub> emission limitations are based on the unit's uncontrolled potential to emit. Therefore, no monitoring, record keeping and reporting requirements are necessary to ensure ongoing compliance with these emission limitations.
- b. 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, these emission limitations/control measures no longer apply.

- c. 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 listed under OAC rule 3745-31-05(A)(3) do not apply to the SO<sub>2</sub> emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.

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

60.4243(a), (b), and (g)	Compliance Requirements
--------------------------	-------------------------

c) Operational Restrictions

- (1) The permittee shall burn only biogas or natural gas with a minimum heat content of 550 Btu/scf in this emissions unit
- (2) Digester gas combusted in this emissions unit shall not exceed 500 ppm of H<sub>2</sub>S.
- (3) The permittee must operate and maintain this emissions unit, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at all times, including during startup, shutdown and malfunction.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas and/or biogas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall keep monthly records of the heat content of the digester gas, in btu/scf.
- (3) The permittee shall monitor and record H<sub>2</sub>S concentrations when operating the emissions unit with digester gas by installing a continuous digester gas monitoring system. The permittee shall install a sampling and analysis system to continuously monitor and record the H<sub>2</sub>S content of the digester gas. The permittee shall properly install, operate, and maintain a continuous digester gas H<sub>2</sub>S monitoring device and recorder that measures and records the H<sub>2</sub>S concentrations in the digester gas when the emissions unit is in operation, including periods of startup and shutdown. The H<sub>2</sub>S monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B, Performance Specification 7 and shall be capable of accurately measuring the H<sub>2</sub>S concentration. The H<sub>2</sub>S monitoring device and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee.

Whenever the monitored value for H<sub>2</sub>S exceeds 95% of the allowable concentration, or the lower limit of the accuracy of the monitoring method as determined by the permittee,

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 H<sub>2</sub>S 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. H<sub>2</sub>S 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.

- (4) The permittee shall calculate and record the combined annual NO<sub>x</sub> emissions from units B001, B002, P001 and P002.
- (5) The permittee shall perform daily checks, when the emissions unit is in operation 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 emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions 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.

- (6) 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(a)(1), (b)(1)	Record keeping, testing for certified engines
60.4245(a)-(c)	Record keeping for certified engines

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 Ohio EPA Northeast District Office.
- (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 PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements in section d):
  - a. each day during which a fuel other than natural or digester gas was burned in this emissions unit;
  - b. each month during which digester gas with a minimum heat content less than 550 btu/scf was burned in this emissions unit;
  - c. each day during which the digester gas exceeded 500 ppm H<sub>2</sub>S;
  - d. any exceedance of the 24.9 tpyNO<sub>x</sub> limitation;

- e. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and
  - f. any corrective actions taken to minimize or eliminate the visible particulate emissions.
- (4) 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(a)-(d)	Notifications and Reporting requirements
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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, Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 44087

f) Testing Requirements

- (1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

NO<sub>x</sub> emissions shall not exceed 1.0 g/hp-hr.  
CO emissions shall not exceed 2.5 g/hp-hr.  
VOC emissions shall not exceed 0.84 g/hp-hr.

Applicable Compliance Method:

Compliance for certified engines shall be determined according to procedures specified in 40 CFR Part 60, Subpart JJJJ and one of the methods specified in 40 CFR 60.4243(a)(2).

b. Emission Limitations:

The combined NO<sub>x</sub> emissions from B001, B002, P001 and P002 shall not exceed 24.9 tons/year.

Applicable Compliance Method:

Compliance with the annual NO<sub>x</sub> emission limitation shall be demonstrated based upon the record keeping and reporting requirements specified in d)(4) and e)(3)d.

c. Emission Limitations:

SO<sub>2</sub> emissions shall not exceed 0.13 lb/mmBtu and 9.5 tons/year.

Applicable Compliance Methods:

If required, compliance with this emission limitation shall be demonstrated based upon emission testing performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

The annual emission limit is based on the unit's potential to emit and was derived by multiplying the emission factor supplied by the facility (0.13 lb/mmBtu) by the maximum heat input (16.7 mmBtu/hr) by (8,760 hrs/year) and the conversion factor (1 ton/2,000 lbs).

d. Emission Limitation:

PE shall not exceed 0.062 lb/mmBtu of actual heat input.

Applicable Compliance Method:

If required, compliance with the PE limitation shall be demonstrated by emission testing performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and OAC rule 3745-17-03(B)(9). Alternative US EPA-approved test methods may be used with prior written approval from Ohio EPA Northeast District Office.

e. Emission Limitation:

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.

Applicable compliance method:

If required, compliance with the stack visible particulate emission limitation shall be demonstrated through visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

(1) None.

**2. B002, Boiler**

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

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 0.182 lb/mmBtu and 1.65 tons/year (tpy).  Carbon monoxide (CO) emissions shall not exceed 0.153 lb/mmBtu and 1.38 tpy.  See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/1/2006	See b)(2)b.
c.	OAC rule 3745-31-05(E) To restrict NO <sub>x</sub> emissions	The combined NO <sub>x</sub> emissions from B001, B002, P001 and P002 shall not exceed 24.9 tons/year.
d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 lb/mmBtu of actual heat input.

(2) Additional Terms and Conditions

- a. The NO<sub>x</sub> and CO emission limitations are based on the unit's uncontrolled potential to emit. Therefore, no monitoring, record keeping, and reporting requirements are necessary to ensure ongoing compliance with these limitations.
- b. 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, these emission limitations/control measures no longer apply.
- c. 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 listed under OAC rule 3745-31-05(A)(3) do not apply to the NO<sub>x</sub> and CO emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas or digester gas with a minimum heat content of 550 Btu/scf in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas and/or biogas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall keep monthly records of the heat content of the digester gas, in Btu/scf.
- (3) The permittee shall calculate and record the combined annual NO<sub>x</sub> emissions from emissions units B001, B002, P001 and P002.
- (4) The permittee shall perform weekly checks, when the emissions unit is in operation 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 emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions 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.

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 Ohio EPA Northeast District Office.
- (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 PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements in section d):
  - a. each day during which a fuel other than natural or digester gas was burned in this emissions unit;
  - b. each month during which digester gas with a minimum heat content less than 550 Btu/scf was burned in this emissions unit; and
  - c. any exceedance of the 24.9 tpyNO<sub>x</sub> emission limitation.

f) Testing Requirements

- (1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

NO<sub>x</sub> emissions shall not exceed 0.182 lb/mmBtu and 1.65 tpy.

Applicable Compliance Method:

Compliance with these limits shall be demonstrated by the following equations using the AP 42 Table 1.4-1 Emission Factor for NO<sub>x</sub> (lb/mmscf) and the heat content for the digester gas (Btu/scf):

$$\text{lb/mmbtu} = (100 \text{ lb/mmscf}) / (550 \text{ Btu/scf})$$
$$\text{tpy} = (\text{lb/mmBtu})(\text{mmBtu/hr})(\text{hrs/yr})(1 \text{ ton}/ 2,000 \text{ lbs})$$

If required, compliance with the NO<sub>x</sub> emission limitation shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7 or 7E.

b. Emission Limitation:

CO emissions shall not exceed 0.153 lb/mmBtu and 1.38 tpy.

Applicable Compliance Method:

Compliance with these emission limitations shall be demonstrated by the following equations using the AP 42 Table 1.4-1 Emission Factor for CO (lb/mmscf) and the heat content for the digester gas (Btu/scf):

$$\text{lb/mmbtu} = (84 \text{ lb/mmscf}) / (550 \text{ Btu/scf})$$
$$\text{tpy} = (\text{lb/mmBtu})(\text{mmBtu/hr})(\text{hrs/yr})(1 \text{ ton}/ 2,000 \text{ lbs})$$

If required, compliance with the CO emission limitation shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

c. Emission Limitation:

The combined NO<sub>x</sub> emissions from B001, B002, P001 and P002 shall not exceed 24.9 tpy.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping and reporting requirements specified in d)(3) and e)(3).

d. Emission Limitation:

Visible PE from the stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with this emission limitation shall be demonstrated through visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

e. Emission Limitation:

PE shall not exceed 0.020 lb/mmBtu of actual heat input.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

g) Miscellaneous Requirements

(1) None.

**3. Emissions Unit Group -Flares: P001,P002,**

EU ID	Operations, Property and/or Equipment Description
P001	Anaerobic Digester System Emergency Flare 1
P002	Anaerobic Digester System Emergency Flare 2

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

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

a. b)(1)d

(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)	For each emergency flare:  Carbon monoxide (CO) emissions shall not exceed 0.185 lb/mmBtu.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	For each emergency flare:  Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 0.06 lb/mmBtu and 5.81 tpy.  Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.03 lb/mmBtu and 2.90 tpy.  See b)(2)a and b)(2)b.
c.	OAC rule 3745-31-05(A)(3), as effective 12/1/2006	See b)(2)c.

d.	OAC rule 3745-31-05(E) (to restrict NO <sub>x</sub> emissions and to ensure compliance with OAC rule 3745-15-07)	The combined NO <sub>x</sub> emissions from B001, B002, P001 and P002 shall not exceed 24.9 tpy.  See b)(2)d.
e.	OAC rule 3745-17-11, Figure II and Table 1	Exempt. See b)(2)e and b)(2)f.
f.	OAC rule 3745-17-07(A)	Exempt. See b)(2)g.

(2) Additional Terms and Conditions

- a. The CO, NO<sub>x</sub> and SO<sub>2</sub> emission limitations are based on the emission unit's uncontrolled potential to emit. Therefore, no monitoring, record keeping and reporting requirements are necessary to ensure ongoing compliance with these emission limitations.
- b. 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, these emission limitations/control measures no longer apply.
- c. 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 listed under OAC rule 3745-31-05(A)(3) do not apply to the NO<sub>x</sub> and SO<sub>2</sub> emissions from this air contaminant source since the uncontrolled potentials to emit are less than 10 tons per year.
- d. Anaerobic digesters, including all associated equipment and grounds, shall be designed, operated and maintained to prevent the emission of objectionable odors.
- e. Figure II in the appendix to OAC rule 3745-17-11 shall not apply to any source with an uncontrolled mass rate of emission less than 10 pounds/hour.
- f. This emissions unit is exempt from the requirements of Table 1 pursuant to OAC rule 3745-17-11(A)(2)(b)(ii).
- g. This facility is located in Wayne County, and is not subject to any mass emission limitation in OAC rules 3745-17-08, 3745-17-09, 3745-17-10 or 3745-17-11.

c) Operational Restrictions

- (1) The permittee shall burn only natural or digester gas with a minimum heat content of 550 Btu/scf.
- (2) A pilot flame shall be maintained at all times in the flare's pilot light burner.
- (3) Emissions from the digestion process shall be vented to the flare during any instance when biogas is present in the feedstock equilibrium tank, primary digester or dual purpose tank and the emissions units are not firing biogas.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas and/or biogas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall keep monthly records of the heat content of the digester gas, in Btu/scf.
- (3) The permittee shall calculate and record the combined annual NO<sub>x</sub> emissions from units B001, B002, P001 and P002.
- (4) The permittee shall maintain daily records of all periods of time when 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 the emissions units were not operating.

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 Ohio EPA Northeast District Office.
- (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 PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements in section d).
  - a. each day during which a fuel other than natural or digester gas was burned in this emissions unit;
  - b. each month during which digester gas with a minimum heat content less than 550 Btu/scf was burned in this emissions unit;
  - c. any exceedance of the 24.9 tpyNO<sub>x</sub> emission limitation; and

- d. all periods of time when 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 the emissions units were not operating.

f) Testing Requirements

- (1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

CO emissions shall not exceed 0.185 lb/mmBtu for each emergency flare.

Applicable Compliance Method:

If required, compliance with the lb/mmBtu CO emission limitation shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

- b. Emission Limitation:

NO<sub>x</sub> emissions shall not exceed 0.06 lb/mmBtu and 5.81 tpy for each emergency flare.

Applicable Compliance Method:

If required, compliance with the NO<sub>x</sub> emission limitation shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7 or 7E.

The annual emission limitation reflects the emission unit's PTE and was developed by multiplying the Varec Biogas (1/12/2012) emission factor for NO<sub>x</sub> (0.06 lb/mmBtu) by the maximum input rate (40,260 scf/hr) by the max heat content (550 Btu/scf) by 8,760 hours/year and the conversion factors (mmBtu/1,000,000 Btu) and (1 ton/2,000 lbs).

- c. Emission Limitation:

SO<sub>2</sub> emissions shall not exceed 0.03 lb/mmBtu and 2.90 tpy for each emergency flare.

Applicable Compliance Method:

If required, compliance with the lb/mmBtu SO<sub>2</sub> emission limitation shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

The annual emission limitation reflects the emission unit's PTE and was developed by multiplying the Varec Biogas (1/12/2012) emission factor for SO<sub>2</sub> (0.03 lb/mmBtu) by the maximum input rate (40,260 scf/hr) by the max heat content (550 Btu/scf) by 8,760 hours/year and the conversion factors (mmBtu/1,000,000 Btu) and (1 ton/2,000 lbs).

d. Emission Limitation:

The combined NO<sub>x</sub> emissions from B001, B002, P001 and P002 shall not exceed 24.9 tpy.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping and reporting requirements specified in d)(3) and e)(3).

g) Miscellaneous Requirements

(1) None.