



Environmental Protection Agency

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

4/14/2011

Bruce Bailey  
French Creek BioEnergy, LLC  
7624 Riverview Rd  
Cleveland, OH 44141

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE  
Facility ID: 0247112002  
Permit Number: P0107735  
Permit Type: Initial Installation  
County: Lorain

Certified Mail

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

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 DAPC Web 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  
French Creek BioEnergy, LLC**

Facility ID:	0247112002
Permit Number:	P0107735
Permit Type:	Initial Installation
Issued:	4/14/2011
Effective:	4/14/2011
Expiration:	4/14/2021





Division of Air Pollution Control
Permit-to-Install and Operate
for
French Creek BioEnergy, LLC

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## Authorization

Facility ID: 0247112002  
Application Number(s): A0041391  
Permit Number: P0107735  
Permit Description: Initial installation of bioenergy facility consisting of a digester with emergency flare, a biogas-fired engine to generate electricity and heat and a 1.5 MM Btu/hour biogas-fired boiler.  
Permit Type: Initial Installation  
Permit Fee: \$600.00  
Issue Date: 4/14/2011  
Effective Date: 4/14/2011  
Expiration Date: 4/14/2021  
Permit Evaluation Report (PER) Annual Date: July 1 - June 30, Due Aug 15

This document constitutes issuance to:

French Creek BioEnergy, LLC  
2350 Abbe Road  
Sheffield, OH 44054

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

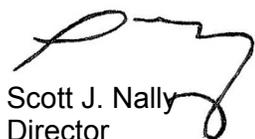
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

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: P0107735  
Permit Description: Initial installation of bioenergy facility consisting of a digester with emergency flare, a biogas-fired engine to generate electricity and heat and a 1.5 MM Btu/hour biogas-fired boiler.

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:	Boiler Unit 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>B002</b>
Company Equipment ID:	CHPU Unit #1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P001</b>
Company Equipment ID:	Emergency Flare
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

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

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

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

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

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

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

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

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

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

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

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

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

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

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

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a



renewal notice to you approximately six months prior to the expiration date of this permit. However, it is very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

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

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

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

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

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

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

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

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

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

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

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

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, 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**

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

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



1. B001, Boiler Unit 1

Operations, Property and/or Equipment Description:

1.5 mmBtu/hr biogas-fired 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 0.53 pound per hour and 2.32 tons per year.  See b)(2)a and c)(1).
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/1/2006	See b)(2)b and c)(1).
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
d.	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 lb/MM Btu of actual heat input.
e.	OAC rule 3745-18-06(G)	Pursuant to OAC rule 3745-18-06(A), this emissions unit is exempt from OAC rule 3745-18-06(G) during any calendar day in which biogas/natural gas are the only fuels burned.
f.	40 CFR Part 63, Subpart JJJJJJ	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, these emission limitations/control measures no longer apply: b)(1)a.
- b. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

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

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

- c. In accordance with 40 CFR 63.11195(e), because this emissions unit is an existing gas-fired boiler located at an area source of HAP emissions, this emissions unit is not required to comply with 40 CFR Part 63, Subparts A and JJJJJ, including initial notification requirements. This regulation becomes effective on May 20, 2011.
- c) Operational Restrictions
  - (1) The permittee shall burn only biogas and/or natural gas in this emissions unit.
- d) Monitoring and/or Recordkeeping Requirements
  - (1) For each day the permittee burns a fuel other than biogas or natural gas in this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- e) Reporting Requirements
  - (1) 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.

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 0.53 pound per hour and 2.32 tons per year.

Applicable Compliance Methods:

Compliance with the hourly emission limitation was demonstrated by multiplying 0.353 PPH/MM Btu (March 23, 2009, emissions testing of similar unit, 1.5 MM Btu/hour biogas boiler at Bryant Stem, LLC in Peru, Indiana) x 1.5 MM Btu/hr = 0.53 lb/hour.

The tpy emission limitation was developed by multiplying the short-term allowable NO<sub>x</sub> emission limitation (0.53 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

b. Emission Limitation:

Visible particulate emissions from any stack 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 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

c. Emission Limitation:

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

Applicable Compliance Method:

If required, particulate emissions shall be determined according to test Methods 1 through 5, as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources", and the procedures specified in 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.

- g) Miscellaneous Requirements
  - (1) None.



2. B002, CHPU Unit #1

Operations, Property and/or Equipment Description:

1475 HP biogas-fired spark ignition engine

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(F)  The permittee has proposed and requested this Best Available Technology (BAT) determination for this emissions unit.	Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 1.0 gram/hp-hr (gram per horsepower-hour) and 14.2 tons per year.  Carbon monoxide (CO) emissions shall not exceed 2.2 grams/hp-hr and 31.3 tons per year.  See c)(1).
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Volatile organic compound (VOC) emissions shall not exceed 0.7 gram/hp-hr and 9.9 tons per year.  Sulfur dioxide (SO <sub>2</sub> ) emissions shall not exceed 0.58 pound per hour and 2.54 tons per year.  See b)(2)a.

c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/1/2006	See b)(2)b.
d.	OAC rule 3745-18-06(G)	Pursuant to OAC rule 3745-18-06(A), this emissions unit is exempt from OAC rule 3745-18-06(G) during any calendar day in which biogas/natural gas are the only fuels burned.
e.	OAC rule 3745-17-11(B)(5)(b)	Particulate emissions (PE) shall not exceed 0.062 lb/MM Btu of actual heat input.
f.	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.
g.	OAC rule 3745-110-03(F)	Because this engine is less than two thousand HP, the engine is not subject to the rule.
h.	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 or equal to 500 horsepower (HP)]	The requirements established under this rule are less stringent than the requirements established under OAC rule 3745-31-05(F) and OAC rule 3745-31-05(A)(3).  See b)(2)d, b)(2)e, c)(2) and c)(3).
i.	40 CFR 60.1 – 19 (40 CFR 60.4246)	Table 3 to Subpart JJJJ of 40 CFR Part 60 – Applicability of Subpart A to Subpart JJJJ shows which parts of the General Provisions in 40 CFR 60.1-19 apply.
j.	40 CFR Part 63, Subpart ZZZZ 40 CFR 63.6590(c)(1)	Because this engine is a new stationary RICE located at an area source, the engine must meet the requirements of this rule by complying with the requirements of 40 CFR Part 60, Subpart JJJJ. No further requirements apply for such engines under this subpart.

(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)(1)b.

- 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 and SO2 emissions from this air contaminant source since the 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 permittee shall comply with the emission standards specified in §60.4233(a) through (c). The permittee shall also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance. In addition, you must demonstrate compliance as specified below.
i. Keep a maintenance plan and records of conducted maintenance and you must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.
d. This emissions unit is subject to 40 CFR Part 60, Subpart JJJJ. 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.
e. The permittee shall comply with the applicable requirements under 40 CFR Part 60, Subpart JJJJ, including the following sections.

Table with 2 columns: Reference, Description. Row 1: 60.4233(e), Emission standards. Row 2: 60.4243(b), Demonstrate compliance.

c) Operational Restrictions

- (1) The permittee shall burn only biogas or natural gas in this emissions unit.
(2) 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.

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

Table with 2 columns: 60.4243, Compliance requirements

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 perform daily checks, when the emissions unit is in operation firing biogas and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit.
a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

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

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



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

Table with 2 columns: Reference code and Description. Row 1: 60.4243(a) and (e) | Record keeping, Emergency operations, special record keeping. Row 2: 60.4245(a) | Record keeping requirements

e) Reporting Requirements

- (1) 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.
(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:

Table with 2 columns: Reference code and Description. Row 1: 60.4245(c) | Reporting requirements. Row 2: 60.4245(d) | Reporting requirements

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

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

and

Ohio EPA, 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:
NOx emissions shall not exceed 1.0 gram/hp-hr.
CO emissions shall not exceed 2.2 grams/hp-hr.
VOC emissions shall not exceed 0.70 gram/hp-hr.

Applicable Compliance Method:

The permittee has purchased an engine certified to comply with these emissions limitations according to procedures specified in 40 CFR Part 60, Subpart JJJJ and demonstrating compliance according to one of the methods specified in 40 CFR 60.4243(a)(2).

b. Emission Limitations:

NO<sub>x</sub> emissions shall not exceed 14.2 tons per year.

CO emissions shall not exceed 31.3 tons per year.

VOC emissions shall not exceed 9.9 tons per year.

Applicable Compliance Method:

Compliance with the annual limitation shall be assumed as long as compliance with the hourly limitations is maintained. Each annual limitation was calculated using the following formula:

$$(g/bhp-hr) \times (0.0022 \text{ lb/g}) \times (\text{bhp of engine}) \times 8760 \text{ hours/year} \times (1 \text{ ton}/2000 \text{ lbs})$$
c. Emission Limitations:

SO<sub>2</sub> emissions shall not exceed 0.58 pound per hour and 2.54 tons per year.

Applicable Compliance Methods:

Compliance with the hourly limitation shall be demonstrated using Landtech equipment to continuously monitor H<sub>2</sub>S. This information shall be used to determine SO<sub>2</sub> emissions. Draeger tubes shall be used as a back-up.

The tpy emission limitation was developed by multiplying the short-term allowable SO<sub>2</sub> emission limitation (0.58 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitation:

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

Applicable Compliance Method:

If required, particulate emissions shall be determined according to test Methods 1 through 5, as set forth in the "Appendix on Test Methods" in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", and the procedures specified in 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 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

(1) None.



3. P001, Emergency Flare

Operations, Property and/or Equipment Description:

Anaerobic Digestion with biofilter for odor control and emergency flare

- 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.

Table with 3 columns: Label, Applicable Rules/Requirements, and Applicable Emissions Limitations/Control Measures. It lists specific rules like ORC 3704.03(T) and OAC rules 3745-31-05(A)(3) and 3745-31-05(A)(3)(a)(ii) with their corresponding emission limits for CO, NOx, and SO2.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-17-11(B)	See b)(2)d.
f.	OAC rule 3745-17-07(A)(1)	See b)(2)e.

(2) Additional Terms and Conditions

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

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

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

The Best Available Technology (BAT) requirements listed under OAC rule 3745-31-05(A)(3) do not apply to the NO<sub>x</sub> or SO<sub>2</sub>, 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 restriction established in b)(1)a and b)(1)b.

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

d. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the the process weight rate is equal to zero. Process weight is defined in OAC rule 3745-17-01(B)(17).

e. This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

## c) Operational Restrictions

- (1) A pilot flame shall be maintained at all times in the flare's pilot light burner.
- (2) 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 emissions unit B002 is not firing biogas.

## d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain daily records of all periods of time during which there was no pilot flame or the flare was inoperable and biogas was present in the feedstock equilibrium tank, primary digester, or dual purpose tank and emissions unit B002 was not operating.
- (2) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified PTIO prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTIO.

## e) Reporting Requirements

- (1) 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.

## 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:

CO emissions shall not exceed 0.185 lb/MM Btu and 19.5 tons per year.

NO<sub>x</sub> emissions shall not exceed 0.06 lb/MM Btu and 6.3 tons per year.

SO<sub>2</sub> emissions shall not exceed 0.03 lb/MM Btu and 3.2 tons per year.

Applicable Compliance Method:

Compliance with the short term (lb/MM Btu) limitation was certified by equipment supplier (Varec Biogas). Compliance with the annual limitation was calculated using the following equations:

$$1,049,760 \text{ scf/d} \times 550 \text{ Btu/cf} \times 1/1,000,000 \times 1 \text{ day/24 hrs} = 24.06 \text{ MM Btu/hr}$$

$$24.06 \text{ MM Btu/hr} \times 0.185 \text{ lb/MM Btu} \times 8760 \text{ hrs/yr} \times 1 \text{ ton/2000 lbs} = 19.5 \text{ tpy CO}$$

$$24.06 \text{ MM Btu/hr} \times 0.06 \text{ lb/MM Btu} \times 8760 \text{ hrs/yr} \times 1 \text{ ton/2000 lbs} = 6.3 \text{ tpy NO}_x$$

$$24.06 \text{ MM Btu/hr} \times 0.03 \text{ lb/MM Btu} \times 8760 \text{ hrs/yr} \times 1 \text{ ton/2000 lbs} = 3.2 \text{ tpy SO}_x$$

- (2) If required, the permittee shall confirm, through the applicable methods and procedures specified in 40 CFR Part 60.18, that the flare's exit velocity and the net heating value of the biogas conform to the maximum design values specified by the flare manufacturer.
- g) Miscellaneous Requirements
- (1) None.