



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

1/14/2016

James Hiendlmayr
Bio-Gas Technologies, LTD
2025 George St
Sandusky, OH 44870

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0322000295
Permit Number: P0120054
Permit Type: Administrative Modification
County: Erie

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	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

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

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

How to appeal this permit

The issuance of this 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
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

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

If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: U.S. EPA
Ohio EPA-NWDO; Michigan; Canada



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
Bio-Gas Technologies, LTD**

Facility ID:	0322000295
Permit Number:	P0120054
Permit Type:	Administrative Modification
Issued:	1/14/2016
Effective:	1/14/2016



Division of Air Pollution Control
Permit-to-Install
for
Bio-Gas Technologies, LTD

Table of Contents

Authorization	1
A. Standard Terms and Conditions	3
1. Federally Enforceable Standard Terms and Conditions	4
2. Severability Clause	4
3. General Requirements	4
4. Monitoring and Related Record Keeping and Reporting Requirements.....	5
5. Scheduled Maintenance/Malfunction Reporting	6
6. Compliance Requirements	6
7. Best Available Technology	7
8. Air Pollution Nuisance	8
9. Reporting Requirements	8
10. Applicability	8
11. Construction of New Sources(s) and Authorization to Install	8
12. Permit-To-Operate Application	9
13. Construction Compliance Certification	10
14. Public Disclosure	10
15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations	10
16. Fees.....	10
17. Permit Transfers	10
18. Risk Management Plans	10
19. Title IV Provisions	10
B. Facility-Wide Terms and Conditions.....	11
C. Emissions Unit Terms and Conditions	13
1. P001, 13.9 mmBtu/hr LFG fired IC engine #1.....	14
2. P004, 9.1 mmBtu/hr LFG fired IC engine #3	21



Final Permit-to-Install
Bio-Gas Technologies, LTD
Permit Number: P0120054
Facility ID: 0322000295
Effective Date: 1/14/2016

Authorization

Facility ID: 0322000295
Facility Description: Electric Services
Application Number(s): A0052839
Permit Number: P0120054
Permit Description: Modification to change the CO limitation for engine #1 (P001) based on a revised emission factor and to change the VOC limit for engine #3 (P004) based on recent stack test data.
Permit Type: Administrative Modification
Permit Fee: \$300.00
Issue Date: 1/14/2016
Effective Date: 1/14/2016

This document constitutes issuance to:

Bio-Gas Technologies, LTD
10215 Hoover Road
Milan, OH 44846

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

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

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

The above named entity is hereby granted a Permit-to-Install for the 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 emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Director



Final Permit-to-Install
Bio-Gas Technologies, LTD
Permit Number: P0120054
Facility ID: 0322000295
Effective Date: 1/14/2016

Authorization (continued)

Permit Number: P0120054

Permit Description: Modification to change the CO limitation for engine #1 (P001) based on a revised emission factor and to change the VOC limit for engine #3 (P004) based on recent stack test data.

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

Emissions Unit ID:	P001
Company Equipment ID:	13.9 mmBtu/hr LFG fired IC engine #1
Superseded Permit Number:	P0115342
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P004
Company Equipment ID:	9.1 mmBtu/hr LFG fired IC engine #3
Superseded Permit Number:	P0115335
General Permit Category and Type:	Not Applicable



Final Permit-to-Install
Bio-Gas Technologies, LTD
Permit Number: P0120054
Facility ID: 0322000295
Effective Date: 1/14/2016

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

- a) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.

- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northwest District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the Ohio EPA DAPC, Northwest District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Northwest District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

- a) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted

local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a Responsible Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
- (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c) The permittee shall submit progress reports to the Ohio EPA DAPC, Northwest District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northwest District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s) not exempt from the requirement to obtain a Permit-to-Install.

11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the

Director within a reasonable time before the termination date and the permittee shows good cause for any such extension.

- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., 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) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., 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). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d) must be obtained before operating the source in a manner that would violate the existing Title V permit requirements.

13. Construction Compliance Certification

The applicant shall identify the following dates in the "Air Services" facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in "Air Services" once the transfer is legally completed. The change must be submitted through "Air Services" within thirty days of the ownership transfer date.

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.



Final Permit-to-Install
Bio-Gas Technologies, LTD
Permit Number: P0120054
Facility ID: 0322000295
Effective Date: 1/14/2016

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.
2. This facility is subject to 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants: Stationary Reciprocating Internal Combustion Engines. The permittee shall comply with all applicable requirements of 40 CFR Part 63, Subpart ZZZZ. The permittee shall also comply with all applicable requirements of 40 CFR Part 63, Subpart A (General Provisions) as identified in 40 CFR Part 63, Subpart ZZZZ. Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR Part 63 Subpart ZZZZ and Subpart A. The MACT 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 appropriate Ohio EPA District office or local air agency.
3. This facility is subject to 40 CFR Part 60, Subpart JJJJ, New Source Performance Standards: Stationary Spark Ignition Internal Combustion Engines. The permittee shall comply with all applicable requirements of 40 CFR Part 60, Subpart JJJJ. The permittee shall also comply with all applicable requirements of 40 CFR Part 60, Subpart A (General Provisions) as identified in Table 3 of 40 CFR Part 63, Subpart JJJJ. Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR Part 60 Subpart JJJJ and Subpart A. 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 appropriate Ohio EPA District office or local air agency.



Final Permit-to-Install
Bio-Gas Technologies, LTD
Permit Number: P0120054
Facility ID: 0322000295
Effective Date: 1/14/2016

C. Emissions Unit Terms and Conditions

1. P001, 13.9 mmBtu/hr LFG fired IC engine #1

Operations, Property and/or Equipment Description:

13.9 mmBtu/hr LFG fired IC engine/generator #1

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)k. and g)(3)

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)	5.90 lbs nitrogen oxides (NOx)/hr; 25.8 tons NOx/yr 16.92 lbs carbon monoxide (CO)/hr; 74.1 tons CO/yr 4.92 lbs volatile organic compounds (VOC)/hr; 21.6 tons VOC/yr See b)(2)a. and g)(1).
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	1.58 lbs sulfur dioxide (SO ₂)/hr; 6.92 tons SO ₂ /yr 0.67 lb particulate matter less than 10 microns in size (PM ₁₀)/hr; 2.93 tons PM ₁₀ /yr b)(2)b. and b)(2)d.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)c.
d.	OAC rule 3745-17-11(B)(5)(b)	0.062 lb of particulate emissions (PE) per mmBtu actual heat input
e.	OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed 20% opacity, as a six minute average, except as provided by rule.
f.	OAC rule 3745-18-06(G)	0.5 lb Sulfur dioxide (SO ₂) per mmBtu actual heat input

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	OAC rule 3745-110-03(F)(2)	See b)(2)g.
h.	40 CFR Part 60, Subpart JJJJ	See b)(2)h. and g)(2).
i.	40 CFR Part 63, Subpart ZZZZ	See b)(2)e.
j.	40 CFR Part 60, Subpart WWW	None, see b)(2)f.
k.	ORC 3704.03(F) OAC rule 3745-114-01	None, see g)(3)

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) requirements for this emissions unit have been determined to be the use of “lean burn technology.” BAT requirements also include compliance with the terms and conditions of this permit.
- b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio’s State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then the requirements of OAC rule 3745-31-05(A)(3), as effective November 30, 2001, will 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 under OAC rule 3745-31-05(A)(3)(a) do not apply to the SO₂ and PM₁₀ from this air contaminant source since the uncontrolled potential to emit* rate for SO₂ and PM₁₀ are each less than 10 tons per year.

*The PTE for SO₂ for this emissions unit is 6.92 tons per year and was determined by assuming the total sulfur content in the landfill gas is converted to SO₂. The sulfur concentration in the landfill gas was determined by the method outlined in AP-42 section 2.4.4.2.

*The PTE for PM₁₀ for this emissions unit is 2.93 tons per year and was determined by multiplying manufacturer’s test data (0.048 lb/mmBtu), a maximum heat input of 13.9 mmBtu/hr, a maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton.

- d. The requirements of this rule also includes compliance with the requirements of OAC rule 3745-18-06(G).
- e. Pursuant to 40 CFR Part 63.6590(c), this emissions unit must meet the requirements of 40 CFR Subpart JJJJ to be in compliance with 40 CFR Part 63, Subpart ZZZZ. No other requirements under 40 CFR Part 63, Subpart ZZZZ apply to this emissions unit.
- f. This emissions unit receives landfill gas from the Erie County Sanitary Landfill which is not subject to the control requirements in 40 CFR Part 60, Subpart WWW. Therefore no control requirements under 40 CFR Part 60, Subpart WWW apply to this emissions unit.
- g. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- h. The permittee must comply with the following requirements of 40 CFR Part 60 Subpart JJJJ:

60.4236	Deadline for importing or installing stationary SI ICE produced in previous model years.
---------	--

c) **Operational Restrictions**

- (1) This emissions unit shall burn only landfill gas.
- (2) The permittee shall install, calibrate, maintain and operate according to the manufacturer's specifications a device at the inlet to the internal combustion engine which completely shuts off gas flow to the internal combustion engine when the internal combustion engine is not operating.
- (3) When the internal combustion engine is not operating, the landfill gas shall be diverted to the existing flare at the Erie County Landfill or to an internal combustion engine that is operating.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall record each day when a fuel other than landfill gas was burned in this emissions unit..

e) **Reporting Requirements**

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than landfill gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

- (2) Any breakdown or malfunction resulting in the emission of raw landfill gas to the atmosphere shall be reported to the Northwest District Office of the Ohio EPA within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere.
- f) Testing Requirements
- (1) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit (most recent testing conducted on January 21, 2015).
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for, NO_x, CO, and VOC.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for NO_x, Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A; for CO, Methods 1 through 4 and 10 of 40 CFR, Part 60, Appendix A; for VOC, Methods 1 through 4 and Method 18, 25, 25a or 25c, as applicable, of 40 CFR, Part 60, Appendix A, including any additional requirements as specified by 40 CFR Part 60, Subpart JJJJ. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The tests shall be conducted while the emissions unit is operating at its maximum capacity unless otherwise specified or approved by the Ohio EPA, NWDO.
 - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, NWDO. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA's refusal to accept the results of the emission tests.
 - f. Personnel from the Ohio EPA shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - g. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, NWDO within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

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

a. Emission Limitation:

5.90 lbs NO_x/hr, 25.8 tons NO_x/yr

16.92 lbs CO/hr, 74.1 tons CO/yr

4.92 lbs VOC/hr, 21.6 tons VOC/yr

Applicable Compliance Method:

Compliance with the hourly mass emission limitations shall be demonstrated by the performance testing required in condition f)(1). The most recent compliance stack test was conducted on January 21, 2015.

The annual emission limitations were developed by multiplying the respective hourly emission limitations by the maximum operating schedule of 8760 hrs/yr, and then dividing by 2000 lbs/ton. Therefore, if compliance is shown with the hourly limitations, compliance with the annual limitations shall also be demonstrated.

b. Emission Limitation:

1.58 lbs SO₂/hr; 6.92 tons SO₂/yr

Applicable Compliance Method:

The hourly emission limitation was determined by multiplying the maximum methane generation rate of 232 dry standard cubic foot (dscf) per minute by an AP-42 emission factor of 113.314 lb/10⁶dscf (Section 2.4.4.2, revised 11/98), then multiplying by 60 minutes/hour.

If required, compliance with the hourly emission limitation shall be determined in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

c. Emission Limitation:

0.67 lb PM₁₀/hr; 2.93 tons PM₁₀/yr

Applicable Compliance Method:

The hourly emission limitation was determined by multiplying the maximum heat input of 13.9 mmBtu/hr by manufacturer's test data (0.048 lb/mmBtu).

If required, compliance with the hourly emission limitation shall be determined in accordance with Methods 1-4 of 40 CFR, Part 60, Appendix A and Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M.

The annual emission limitation was determined by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

d. Emission Limitation:

0.062 lb PE/mmBtu actual heat input

Applicable Compliance Method:

The potential to emit* for this emissions unit is 0.048 lb PE/mmBtu and complies with the lb/mmBtu emission limitation. Therefore no record keeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

*Potential to emit for this emissions unit was established by manufacturer's emission testing data.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1 - 5 of 40 CFR Part 60, Appendix A.

e. Emission Limitation:

0.5 lb SO₂/mmBtu actual heat input

Applicable Compliance Method:

The potential to emit* for this emissions unit is 0.1137 lb SO₂/mmBtu and complies with the lb/mmBtu emission limitation. Therefore no record keeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

* The potential to emit for SO₂ was determined assuming the total sulfur content in the landfill gas is converted to SO₂. The sulfur concentration in the landfill gas was determined by the method outlined in AP-42 section 2.4.4.2.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1 – 4 and 6 of 40 CFR Part 60, Appendix A.

f. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as specified by rule

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated determined in accordance with OAC Rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

- (1) The permittee shall incorporate "Good Engineering Practices" with regards to the design of the stack height on this emissions unit. For this permit determination, a stack with a minimum height that meets or exceeds the maximum height of any nearby hill or other structure shall meet the "Good Engineering Practice" requirements.
- (2) This emissions unit shall meet the applicable requirements pursuant to 40 CFR Part 60.4243 of Subpart JJJJ Part 60 - Compliance Requirements for Owners and Operators.
- (3) Modeling to demonstrate compliance with, the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

2. P004, 9.1 mmBtu/hr LFG fired IC engine #3

Operations, Property and/or Equipment Description:

9.1 mmBtu/hr (input power) LFG fired IC engine #3, 1148 brhp (output power)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) 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)	5.06 lbs nitrogen oxides (NOx)/hr; 22.16 tons NOx/yr 8.34 lbs carbon monoxide (CO)/hr; 36.53 tons CO/yr 1.31 lbs volatile organic compounds (VOC)/hr; 5.74 tons VOC/yr 2.21 lbs sulfur dioxide (SO2)/hr; 9.68 tons SO2/yr 0.56 lb particulate matter less than 10 microns in size (PM10)/hr; 2.47 tons PM10/yr See b)(2)a. and b)(2)e.
b.	ORC 3704.03(T)	See b)(2)b.
c.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)c. and b)(2)f.
d.	OAC rule 3745-31-05(A)(3), as effective 12/01/06	See b)(2)d.
e.	OAC rule 3745-17-11(B)(5)(b)	See b)(2)i.
f.	OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed 20% opacity, as a six minute average, except as provided by rule
g.	OAC rule 3745-18-06(G)	See b)(2)i.
h.	OAC rule 3745-110-03(F)(2)	See b)(2)j.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
i.	40 CFR, Part 60, Subpart JJJJ	See b)(2)i., b)(2)k., b)(2)l., d)(2), e)(3), f)(3), g)(1) and g)(2)
j.	40 CFR, Part 63, Subpart ZZZZ	See b)(2)g.
k.	40 CFR, Part 60, Subpart WWW	See b)(2)h.
l.	40 CFR, Part 60, Subpart A 40 CFR 60.1-19 (40 CFR 60.4246)	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. This permit establishes legally and practically enforceable emission limitations under OAC rule 3745-31-05(F) for the purpose of establishing potential to emit (PTE).
- b. In accordance with ORC 3704.03(T), this air contaminant sources has the potential to emit of ten or more tons per year of carbon monoxide (CO) and nitrogen oxides (NOx) and as such shall be meet the requirements of any applicable MACT rule in effect. The emissions unit involves a spark ignition reciprocating internal combustion engine and therefore shall meet the requirements of 40 CFR, Part 63, Subpart ZZZZ.
- c. Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/2001 have been determined to be compliance with the voluntary restrictions established in accordance with OAC rule 3745-31-05(F) [see b)(2)a.].

The permittee has satisfied the Best Available Technology (BAT) requirements for VOC, SO2 and PM10 emissions pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then the requirements of OAC rule 3745-31-05(A)(3), as effective November 30, 2001, will no longer apply.

It should be noted that the requirements established pursuant to OAC rule 3745-31-05(F) will remain applicable after the above SIP revisions are approved by U.S. EPA.

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the VOC, SO₂ and PM₁₀ from this air contaminant source since the uncontrolled potential to emit* rate for VOC, SO₂ and PM₁₀ are each less than 10 tons per year.

*The PTE for SO₂ for this emissions unit is 9.68 tons per year and was determined by assuming the total sulfur content in the landfill gas is converted to SO₂. The sulfur concentration in the landfill gas was determined by the method outlined in AP-42 section 2.4.4.2 [revised 11/98].

*The PTE for PM₁₀ for this emissions unit is 4.12 tons per year and was determined by multiplying the AP-42 emission factor of 48 lb PM₁₀/10⁶dscf methane [Table 2.4-5, revised 11/98] by a maximum hourly landfill gas rate of 19,500 cf/hr, by a maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton.

*The PTE for VOC for this emissions unit is 5.74 tons per year and was determined by multiplying a stack test derived emission factor of 0.14 lb VOC/mmBtu by the maximum rated capacity of 9.1 mmBtu/hr by a maximum operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton.

- e. This rule also includes compliance with the Requirements of 40 CFR Part 60 Subpart JJJJ [see g)(2)]. It should be noted that the emission limitations of OAC rule 3745-31-05(F) are more stringent than the emission limitations established pursuant to 40 CFR Part 60 Subpart JJJJ [see b)(2)g.].
- f. The requirements of this rule also include compliance with the requirements of OAC rule 3745-18-06(G).
- g. Pursuant to 40 CFR Part 63.6590(c), this emissions unit must meet the requirements of 40 CFR Subpart JJJJ to be in compliance with 40 CFR Part 63, Subpart ZZZZ. No other requirements under 40 CFR Part 63, Subpart ZZZZ apply to this emissions unit.
- h. This emissions unit receives landfill gas from the Erie County Sanitary Landfill which is not subject to the control requirements in 40 CFR Part 60, Subpart WWW. Therefore no control requirements under 40 CFR Part 60, Subpart WWW apply to this emissions unit.
- i. The emission limitations specified by this rule are as stringent as or less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(F).
- j. This emissions unit is exempt from the requirements of this rule pursuant to OAC rule 3745-110-03(K)(3).

- k. The following term and condition addresses the requirements for replacing emissions unit P004 due to unforeseen circumstances (i.e. catastrophic failure) which result in the existing engine being inoperable:
 - i. The replacement engine must be manufactured by Caterpillar with a model of G3516LE, and have the same emission factors as the existing engine.
 - ii. The replacement engine must not increase the rated capacity, production rate, or throughput of the existing engine.
 - iii. The permittee shall notify the Ohio EPA, Northwest District Office when an engine replacement is necessary. This notification may be verbally or in writing and must be within five days of the determination that an engine replacement is necessary due to the inoperative state of the existing engine.
 - iv. The permittee shall submit the written notification requested in section e)(4).
 - v. The replacement engine must comply with all of the terms and conditions of this permit.
 - vi. The permittee may install and operate only three engines at this facility.
 - vii. If the permittee installs an engine that was manufactured after July 1, 2007, this engine will be subject to the requirements of 40 CFR Subpart JJJJ [See d)(2) and e)(3)].
 - l. If the permittee does not operate and maintain a certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, that engine will be considered a non-certified engine [See f)(3)].
- c) Operational Restrictions
- (1) This emissions unit shall burn only landfill gas.
 - (2) The permittee shall install, calibrate, maintain and operate according to the manufacturer's specifications a device at the inlet to the internal combustion engine which completely shuts off gas flow to the internal combustion engine when the internal combustion engine is not operating.
 - (3) When the internal combustion engine is not operating, the landfill gas shall be diverted to the existing flare or to an internal combustion engine that is operating.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall record each day when a fuel other than landfill gas was burned in this emissions unit.

- (2) If applicable, the permittee shall comply with the applicable monitoring and recordkeeping requirements required under 40 CFR, Subpart JJJJ, including the following sections:

60.4243(a)(1) and (b)(1)	certified engine maintenance records
60.4243(a)(1) and b)(2)	non-certified engine maintenance plan and maintenance records
60.4245(a)	documentation and record requirements for certified and non-certified engines

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than landfill gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (2) Any breakdown or malfunction resulting in the emission of raw landfill gas to the atmosphere shall be reported to the Northwest District Office of the Ohio EPA within one hour after the occurrence, or as soon as reasonably possible, and immediate remedial measures shall be undertaken to correct the problem and prevent further emissions to the atmosphere.
- (3) If applicable, the permittee shall submit notifications and reports for non-certified engines to the appropriate Ohio EPA District Office or local air agency as required pursuant to 40 CFR, Subpart JJJJ, including the following sections:

60.4245(c)	non-certified engine notification
60.4245(d)	due date for stack test reports

- (4) In the event of unforeseen circumstances (i.e. catastrophic failure) which results in the existing engine being inoperable, the permittee must submit a written statement to the Ohio EPA, Northwest District Office. The statement must be submitted within 30 days of the installation of the replacement engine and shall include the following information:
- a. The manufactured date for the replacement engine;
 - b. The manufacturer, model number and serial number for the replacement engine;
 - c. The installation and startup dates for the replacement engine; and
 - d. An affirmation from the permittee, that the replacement engine will be operated in compliance with the terms and conditions of this permit.

- (5) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

- (1) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 3 months after start-up (most recent stack testing conducted on January 21, 2015).
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for, NO_x, CO, and VOC.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:
 - i. for NO_x, Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A;
 - ii. for CO, Methods 1 through 4 and 10 of 40 CFR, Part 60, Appendix A; and
 - iii. for VOC, Methods 1 through 4 and Method 18, 25, 25a or 25c, as applicable, of 40 CFR, Part 60, Appendix A, including any additional requirements as specified by 40 CFR Part 60, Subpart JJJJ.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted at a Maximum Source Operating Rate (MSOR), unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. MSOR is defined as the condition that is most likely to challenge the emission control measures with regards to meeting the applicable emission standard(s). Although it generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test at the MSOR is justification for not accepting the test results as a demonstration of compliance.
- e. Not later than 45 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, NWDO. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA's refusal to accept the results of the emission tests.
- f. Personnel from the Ohio EPA shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that

the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

- g. A comprehensive written report on the results of the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, NWDO within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.
- (2) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

5.06 lbs NO_x/hr; 22.16 tons NO_x/yr

8.34 lbs CO/hr; 36.53 tons CO/yr

1.31 lbs VOC/hr; 5.74 tons VOC/yr

Applicable Compliance Method:

Compliance with the hourly mass emission limitations above shall be demonstrated based on the results of emission testing as required by the performance testing in condition f)(1). The most recent compliance stack test was conducted on January 21, 2015.

The annual emission limitations were developed by multiplying the respective hourly emission limitations by the maximum operating schedule of 8760 hrs/yr, and then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitations, compliance with the annual limitations shall also be demonstrated.

b. Emission Limitations:

2.21 lbs SO₂/hr; 9.68 tons SO₂/yr

Applicable Compliance Method:

The hourly emission limitation was determined by multiplying the maximum methane generation rate of 325 dry standard cubic foot (dscf) per minute by an AP-42 emission factor of 113.314 lb/10⁶dscf [Table 2.4-5, revised 11/98], then multiplying by 60 minutes/hour.

If required, compliance with the hourly emission limitation shall be determined in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr, and then

dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

c. Emission Limitations:

0.56 lb PM10/hr; 2.47 tons PM10/yr

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the SIP-approved emission limitation of 0.062 lb PE/mmBtu of actual heat input by the maximum heat input of 9.1 mmBtu/hr.

If required, compliance with the hourly emission limitation shall be determined in accordance with Methods 1-4 of 40 CFR, Part 60, Appendix A and Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M.

The annual emission limitation was determined by multiplying the hourly emission limitation by the maximum operating schedule of 8760 hrs/yr, and then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

d. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as specified by rule

Applicable Compliance Method:

If required, compliance with the visible PE limitations shall be demonstrated determined in accordance with OAC Rule 3745-17-03(B)(1).

(3) If a non-certified engine is installed at the facility, and the engine was manufactured after July 1, 2007, the permittee shall conduct emission testing for this emissions unit in accordance with the following requirements:

a. The emissions testing shall be conducted within one year of engine startup and conduct subsequent performance testing every 8760 hrs of operation or 3 years, whichever comes first, thereafter to demonstrate compliance.

b. The emission testing shall be conducted to demonstrate compliance with the following limits:

i. The mass emission limitations of 5.06 lbs NO_x/hr, 8.34 lbs CO/hr and 1.31 lbs VOC/hr.

c. The following test methods shall be employed to demonstrate compliance with the above emission limitations:

- i. Methods 1-4 of 40 CFR, Part 60, Appendix A;
- ii. For NO_x – Method 7 of 40 CFR, Part 60, Appendix A;
- iii. For CO – Method 10 of 40 CFR, Part 60, Appendix A; and
- iv. For VOC – Methods 18, 25 or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

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

- d. The tests shall be conducted while this emissions unit is operating at its maximum capacity and meet the testing requirements in 40 CFR 60.4244, unless otherwise specified or approved by the Ohio EPA, Division of Air Pollution Control. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Division of Air Pollution Control. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the times and dates of the tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Ohio EPA District Office's air agency's refusal to accept the results of the emissions tests.
- e. Personnel from the Ohio EPA District Office's air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions unit and/or the performance of the control equipment. A comprehensive written report on the emissions tests shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Division of Air Pollution Control within 60 days following completion of the tests.

g) **Miscellaneous Requirements**

- (1) The permittee shall incorporate "Good Engineering Practices" with regards to the design of the stack height on this emissions unit. For this permit determination, a stack with a minimum height that meets or exceeds the maximum height of any nearby hill or other structure shall meet the "Good Engineering Practice" requirements.
- (2) This emissions unit shall meet the applicable requirements pursuant to 40 CFR Part 60.4243 of Subpart JJJJ Part 60 - Compliance Requirements for Owners and Operators.