



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

1/6/2016

Certified Mail

Mr. Bruce Bailey  
 Haviland Energy LLC  
 5575 Granger Road  
 Suite 320  
 Independence, OH 44313

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0363002004  
 Permit Number: P0120004  
 Permit Type: Administrative Modification  
 County: Paulding

Dear Permit Holder:

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

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

**How to appeal this permit**

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

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

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

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



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
Haviland Energy LLC**

Facility ID:	0363002004
Permit Number:	P0120004
Permit Type:	Administrative Modification
Issued:	1/6/2016
Effective:	1/6/2016
Expiration:	1/11/2017





**Division of Air Pollution Control  
Permit-to-Install and Operate**

for  
Haviland Energy LLC

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**Final Permit-to-Install and Operate**  
Haviland Energy LLC  
**Permit Number:** P0120004  
**Facility ID:** 0363002004  
**Effective Date:** 1/6/2016

## Authorization

Facility ID: 0363002004  
Application Number(s): M0003733  
Permit Number: P0120004  
Permit Description: Administrative permit modification to remove the requirements of 40 CFR Part 60, Subpart JJJJ from the engine.  
Permit Type: Administrative Modification  
Permit Fee: \$100.00  
Issue Date: 1/6/2016  
Effective Date: 1/6/2016  
Expiration Date: 1/11/2017  
Permit Evaluation Report (PER) Annual Date: Oct 1 - Sept 30, Due Nov 15

This document constitutes issuance to:

Haviland Energy LLC  
115 W. Main Street  
Haviland, OH 45851

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

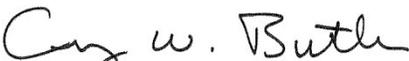
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

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

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

  
Craig W. Butler  
Director



**Final Permit-to-Install and Operate**  
Haviland Energy LLC  
**Permit Number:** P0120004  
**Facility ID:** 0363002004  
**Effective Date:** 1/6/2016

## Authorization (continued)

Permit Number: P0120004

Permit Description: Administrative permit modification to remove the requirements of 40 CFR Part 60, Subpart JJJJ from the engine.

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>P002</b>
Company Equipment ID:	P002
Superseded Permit Number:	P0109081
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install and Operate**  
Haviland Energy LLC  
**Permit Number:** P0120004  
**Facility ID:** 0363002004  
**Effective Date:** 1/6/2016

## **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. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. 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 of this permit 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 [DO/LAA] 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 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 emission 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.

**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.



**Final Permit-to-Install and Operate**  
Haviland Energy LLC  
**Permit Number:** P0120004  
**Facility ID:** 0363002004  
**Effective Date:** 1/6/2016

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

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) None.
2. The following are operational restrictions for emissions units B001, P001, and/or P002 and have been included in the facility-wide terms and conditions to reduce redundancy within the individual emissions unit terms and conditions:
  - a) Digester gas combusted in emissions units B001, P001, and P002 shall not exceed 1000 parts per million on a volume basis (ppm<sub>v</sub>) of hydrogen sulfide.
  - b) Digester gas combusted in emissions units B001, P001, and P002 shall have a minimum heat content of 500 Btu / scf.
3. Monitoring and/or recordkeeping requirements for emissions units B001, P001, and/or P002 are included in Sections B.4 and B.5 below. The common monitoring and/or recordkeeping requirements have been included in the facility-wide terms and conditions to reduce redundancy within the individual emissions unit terms and conditions.
4. The permittee shall monitor and record hydrogen sulfide concentrations for the digester gas, when any of the emissions units B001, P001, and/or P002 are operating with digester gas, using one of the two following options:

Option 1: Weekly gas detector tube sampling. The accuracy of gas detector tubes is presumed to be ± 10%, unless the permittee is able to demonstrate better accuracy of the detector tubes compared to a certified gas standard. The permittee shall perform gas detector tube monitoring in accordance with the manufacturer's instructions for use of the detector tubes and associated sampling system. Any deviations from the manufacturer's instructions should be recorded with the concentration results of the sampling. Monitoring should be performed for any week where operation of emissions units B001, P001, and/or P002 is occurring.

Option 2: Continuous digester gas monitoring system. The permittee may install a sampling and analysis system to continuously monitor and record the H<sub>2</sub>S content of the digester gas. The permittee shall properly install, operate, and maintain a continuous digester gas H<sub>2</sub>S monitoring device and recorder that measures and records the H<sub>2</sub>S concentrations in the digester gas when the emissions unit is in operation, including periods of startup and shutdown. The H<sub>2</sub>S monitoring device and recorder shall be capable of satisfying the performance requirements specified in 40 CFR Part 60, Appendix B,

Performance Specification 5 and shall be capable of accurately measuring the H<sub>2</sub>S concentration. The H<sub>2</sub>S monitoring device and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee.

Whenever the monitored value for hydrogen sulfide exceeds the lower limit of the accuracy of the monitoring system as measured by either of the above monitoring options, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a) the date and time the deviation began.
- b) the magnitude of the deviation at that time.
- c) the date the investigation was conducted.
- d) the name(s) of the personnel who conducted the investigation.
- e) the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the hydrogen sulfide concentration below the maximum limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f) a description of the corrective action.
- g) the date the corrective action was completed.
- h) the date and time the deviation ended.
- i) the total period of time (in minutes) during which there was a deviation.
- j) hydrogen sulfide readings immediately after the corrective action was implemented.
- k) the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.  
[OAC 3745-31-05(F)]

5. The permittee shall also maintain monthly records of the heat content of the digester gas, in Btu / scf, for months where any of the emissions units B001, P001, and/or P002 are operating with digester gas.  
[OAC 3745-31-05(F)]
6. Informational note: This permit provides construction /operation authorization under the Ohio EPA Division of Air Pollution Control. As such, this permit should not be confused with, nor should be construed to provide, construction /operation authorization under the jurisdiction of other programs, such as the Ohio EPA Division of Surface Water, or the State of Ohio Department of Agriculture.



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

Haviland Energy LLC

**Permit Number:** P0120004

**Facility ID:** 0363002004

**Effective Date:** 1/6/2016

7. The Ohio EPA has determined that this facility may be applicable to the requirements of an area source MACT/GACT rule that the Ohio EPA does not have the delegated authority to implement. Although Ohio EPA has determined that an area source MACT (also known as 'GACT' - Generally Achievable Control Technology) may apply, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised that all requirements associated with these rules are in effect and are enforceable by U.S. EPA. For more information on the area source rules, please refer to the following U.S. EPA website: <http://www.epa.gov/ttn/atw/area/arearules.html>

Area source MACT/GACT applicability may include, but may not be limited to, 40 CFR, Part 63, Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines).



**Final Permit-to-Install and Operate**  
Haviland Energy LLC  
**Permit Number:** P0120004  
**Facility ID:** 0363002004  
**Effective Date:** 1/6/2016

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

**1. P002, P002**

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

0.81 MW Generator - 1215 HP I.C. engine (digester-gas fuel)

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

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

a. b)(1)j. and d)(3).

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	1.0 g/hp-hr (gram per horsepower - hour) of nitrogen oxides (NO <sub>x</sub> )  1.8 g/hp-hr of carbon monoxide (CO)  See b)(2)f.
b.	OAC rule 3745-31-05(F)	0.67 lb sulfur dioxide (SO <sub>2</sub> ) per hour, and 2.93 tons SO <sub>2</sub> per year  Operational restrictions, See c)(1)  See b)(2)a and b)(2)b.
c.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	0.7 g/hp-hr of volatile organic compounds (VOC), and 8.21 tons VOC per year  See b)(2)c.
d.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/1/2006	See b)(2)d.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-18-06(G)	See b)(2)f.
f.	OAC rule 3745-17-11(B)(5)(b)	0.062 pound particulate emissions (PE)/mmBtu actual heat input
g.	OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
h.	40 CFR Part 60, Subpart JJJJ	See b)(2)e.
i.	OAC rule 3745-110	See b)(2)g.
j.	ORC 3704.03(F) OAC rule 3745-114-01	See d)(3).

(2) Additional Terms and Conditions

- a. This Permit to Install /Operate for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements [see b)(2)b.ii] under OAC rule 3745-31-05(A)(3): 0.67 lb sulfur dioxide (SO<sub>2</sub>) per hour, and 2.93 tons SO<sub>2</sub> per year.
- b. Best Available Technology (BAT) requirements for this emissions unit 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 voluntary restrictions were intentionally established to be consistent with the BAT requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01 for two specific purposes as indicated below:
  - i. BAT requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01 would be fulfilled by compliance with the voluntary restrictions;
  - ii. The emissions unit will avoid any BAT requirements under OAC rule 3745-31-05(A)(3), as effective 12/01/06 [see b)(2)d.].

The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS 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 these emission limits/control measures 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.

BAT requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001 were not established for particulate matter 10 microns or less in size (PM<sub>10</sub>) due to the negligible level of PM<sub>10</sub> emissions. See b)(2)d. for emission level details.

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

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 PM<sub>10</sub> emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons per year for each of these pollutants.

The potential to emit for PM<sub>10</sub> is 0.022 tons per year and was determined by multiplying the maximum engine combustion rate of 8.29 mmBtu/hr, a company supplied emission factor of 0.005 lb/mmBtu, a maximum operating schedule of 8,760 hours per year and dividing by 2000 lbs/ton.

The potential to emit for VOC limitation was determined by multiplying the company-supplied emission factor of 0.7 g/hp-hr, a maximum engine hp of 1215, a maximum operating schedule of 8760 hrs/yr and dividing by 454 g/lb and 2000 lbs/ton.

- e. This spark ignition (SI) internal combustion engine is not subject to the requirements of 40 CFR Part 60, Subpart JJJJ due to the manufacturer date of the engine (2/6/2001).

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

- f. The SO<sub>2</sub> emission limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(F).
- g. The NO<sub>x</sub> emission limitation specified by this rule is less stringent than the emissions limitation established pursuant to ORC 3704.03(T).

c) Operational Restrictions

- (1) The permittee is referred to "B. - Facility-Wide Terms and Conditions" of this permit, for additional operational restrictions for this emissions unit (see Section B.2).

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the natural gas and digester gas fuel usage in this unit in millions of standard cubic feet (MMSCF).
- (2) For each day during which the permittee burns a fuel other than natural gas and/or digester fuel, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (3) 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.
- (4) The permittee is referred to "B. - Facility-Wide Terms and Conditions" of this permit, for additional monitoring /recordkeeping requirements for this emissions unit (see Sections B.4 and B.5).

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 permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

- (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(1) above:
- a. all days during which any visible particulate emissions were observed from the stack serving this emission unit; and
  - b. any corrective actions taken to eliminate the visible particulate emissions.

The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for hydrogen sulfide in d)(5) above:

- c. all days during with hydrogen sulfide exceedance readings from this emission unit; and
- d. any corrective actions taken to correct the hydrogen sulfide exceedance.

The above information shall be provided as an attachment to the PER. If there were no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

- (3) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be otherwise submitted electronically (e.g. email), or mailed as a hard copy to the appropriate district office or local air agency.

f) Testing Requirements

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

- a. Emissions Limitation:  
1.0 g/hp-hr NO<sub>x</sub>

Applicable Compliance Method:

The emission limitation was established in accordance with the company-supplied emission factor. If required, compliance with the NO<sub>x</sub> emission limitation shall be determined in accordance with Methods 1-4 and 7E of 40 CFR Part 60, Appendix A.

- b. Emissions Limitation:  
1.8 g/hp-hr CO

Applicable Compliance Method:

The emission limitation was established in accordance with the company-supplied emission factor. If required, compliance with the CO emission limitation shall be determined in accordance with Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.

- c. Emissions Limitation:  
 0.7 g/hp-hrVOC, and 8.21 tons VOC per year

Applicable Compliance Method:

The emission limitation was established in accordance with the company-supplied emission factor. If required, compliance with the VOC emission limitation shall be determined in accordance with Methods 1-4 and 25 or 25A, as applicable, of 40 CFR Part 60, Appendix A.

The annual VOC limitation was developed by multiplying the g/hp-hr limitation by 1215 hp and 8760 hrs/yr of operation, then dividing by 454 g/lb and 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 pound particulate emissions (PE)/mmBtu actual heat input

Applicable Compliance Method:

Compliance with the emission limitation may be demonstrated using the company-supplied emission factor of 0.006 lb PM<sub>10</sub> per mmBtu.

If required, compliance with the PE limitation shall be determined in accordance with Methods 1- 5 of 40 CFR Part 60, Appendix A.

- e. Emissions Limitation:  
 0.67 lb sulfur dioxide SO<sub>2</sub> per hour and 2.93 tons SO<sub>2</sub> per year

Applicable Compliance Method:

The permittee shall demonstrate compliance with the emissions limitation through the required monitoring and recordkeeping in d)(2) and using the following equation:

$$E = \text{Gross output of engine (mmBtu/hr)} * (106 \text{ Btu} / 1 \text{ mmBtu}) * (1 / \text{digester gas heat content}) * (\text{H}_2\text{S ppm}_v / 1,000,000) * 0.088 \text{ lb H}_2\text{S/ft}^3 \text{ H}_2\text{S} * 1.88 \text{ lb SO}_2/\text{lb H}_2\text{S} = \text{SO}_2\text{lb/hr}$$

Where:

E = SO<sub>2</sub> emissions rate, lb / hr

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

H<sub>2</sub>S ppm<sub>v</sub> = average concentration of H<sub>2</sub>S in digester gas, from d)(2)

If required, compliance with the SO<sub>2</sub> emission limitation shall be determined in accordance with Methods 1 - 4, and 6 of 40 CFR Part 60, Appendix A.

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



f. Emissions Limitation:  
Visible PE shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:  
If required, compliance with the visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

g) Miscellaneous Requirements

(1) None.