



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

11/6/2015

Mr. BRIAN GRESSER
 City of Akron Water Reclamation Facility
 2460 AKRON-PENINSULA ROAD
 AKRON, OH 44313

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1677010255
 Permit Number: P0114966
 Permit Type: Initial Installation
 County: Summit

Certified Mail

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

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, Akron Beacon Journal. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically 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. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
 Permit Review/Development Section
 Ohio EPA, DAPC
 50 West Town Street Suite 700
 PO Box 1049
 Columbus, Ohio 43216-1049

and Akron Regional Air Quality Management District
 1867 West Market St.
 Akron, OH 44313

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Akron Regional Air Quality Management District at (330)375-2480.

Sincerely,

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

Cc: U.S. EPA Region 5 Via E-Mail Notification
 ARAQMD; Pennsylvania; West Virginia; Canada
 Annette Berger

PUBLIC NOTICE

The following matters are the subject of this public notice by the Ohio Environmental Protection Agency. The complete public notice, including any additional instructions for submitting comments, requesting information, a public hearing, or filing an appeal may be obtained at: <http://epa.ohio.gov/actions.aspx> or Hearing Clerk, Ohio EPA, 50 W. Town St., Columbus, Ohio 43215. Ph: 614-644-2129 email: HClerk@epa.ohio.gov

Draft Air Pollution Permit-to-Install and Operate Initial Installation
City of Akron Water Reclamation Facility

2460 AKRON-PENINSULA ROAD,, Akron, OH 44313

ID#:P0114966

Date of Action: 11/6/2015

Permit Desc:FEPTIO for the installation of three new digester gas-fired combined heat and power unit (CHPU) reciprocating internal combustion engine-electrical generator sets, two new natural gas/digester gas-fired non-water/steam thermal fluid heaters and one new digester gas flare..

The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the ID # or: Chris Radcliffe, Akron Regional Air Quality Management District, 1867 West Market St., Akron, OH 44313. Ph: (330)375-2480



DRAFT

**Division of Air Pollution Control
Permit-to-Install and Operate
for
City of Akron Water Reclamation Facility**

Facility ID:	1677010255
Permit Number:	P0114966
Permit Type:	Initial Installation
Issued:	11/6/2015
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install and Operate
for
City of Akron Water Reclamation Facility

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Draft Permit-to-Install and Operate
City of Akron Water Reclamation Facility
Permit Number: P0114966
Facility ID: 1677010255
Effective Date: To be entered upon final issuance

Authorization

Facility ID: 1677010255
Application Number(s): A0048023
Permit Number: P0114966
Permit Description: FEPTIO for the installation of three new digester gas-fired combined heat and power unit (CHPU) reciprocating internal combustion engine-electrical generator sets, two new natural gas/digester gas-fired non-water/steam thermal fluid heaters and one new digester gas flare.
Permit Type: Initial Installation
Permit Fee: \$3,600.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 11/6/2015
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

City of Akron Water Reclamation Facility
2460 AKRON-PENINSULA ROAD
Akron, OH 44313

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:

Akron Regional Air Quality Management District
1867 West Market St.
Akron, OH 44313
(330)375-2480

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



Authorization (continued)

Permit Number: P0114966

Permit Description: FEPTIO for the installation of three new digester gas-fired combined heat and power unit (CHPU) reciprocating internal combustion engine-electrical generator sets, two new natural gas/digester gas-fired non-water/steam thermal fluid heaters and one new digester gas flare.

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

Emissions Unit ID:	P005
Company Equipment ID:	Flare 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: New Combined Heat & Power Units

Emissions Unit ID:	P002
Company Equipment ID:	CHPU 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P003
Company Equipment ID:	CHPU 3
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P004
Company Equipment ID:	CHPU 4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: Thermal Fluid Heaters

Emissions Unit ID:	B013
Company Equipment ID:	TFH 1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B014
Company Equipment ID:	TFH 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Draft Permit-to-Install and Operate
City of Akron Water Reclamation Facility

Permit Number: P0114966

Facility ID: 1677010255

Effective Date: To be entered upon final issuance

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 Akron Regional Air Quality Management District 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.



Draft Permit-to-Install and Operate
City of Akron Water Reclamation Facility

Permit Number: P0114966

Facility ID: 1677010255

Effective Date: To be entered upon final issuance

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. 40 CFR Part 60, Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Emissions units B013 and B014 (Thermal Fluid Heaters 1 and 2) used in an anaerobic digester system located at an area source of hazardous air pollutants are subject to 40 CFR Part 60, Subparts Dc and A (General Provisions). Applicable sections, not including the definitions, of Subpart Dc follow. It is the sole responsibility of the owner or operator to comply with all applicable requirements of Subpart Dc, whether or not said requirements are fully and correctly identified in this permit. Besides emissions units B013 and B014, any other stationary small industrial-commercial-institutional steam generating unit(s) at the facility may be subject to applicable NSPS requirements of Subpart Dc. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the Ohio EPA District Office or Local Air Agency.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

§ 60.42c Standard for sulfur dioxide (SO₂).

(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under § 60.48c(f), as applicable.

(4) Other fuels-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by § 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(f) Fuel supplier certification shall include the following information:

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in § 60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in § 60.42C to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

3. 40 CFR Part 60, Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Emissions units P002 through P004 (New Combined Heat & Power Units 2 through 4) used in an anaerobic digester system located at an area source of hazardous air pollutants are subject to 40 CFR Part 60, Subparts JJJJ and A (General Provisions). Applicable sections, not including the definitions and tables, of Subpart JJJJ follow. It is the sole responsibility of the owner or operator to comply with all applicable requirements of Subpart JJJJ, whether or not said requirements are fully and correctly

identified in this permit. Besides emissions units P002 through P004, any other stationary internal combustion engine(s) at the facility may be subject to applicable NSPS requirements of Subpart JJJJ or 40 CFR Part 60, Subpart IIII. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the Ohio EPA District Office or Local Air Agency.

§ 60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP.

(6) The provisions of § 60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction after June 12, 2006.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

§ 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

§ 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in § 60.4233 over the entire life of the engine.

§ 60.4236 What is the deadline for importing or installing stationary SI ICE produced in previous model years?

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in § 60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in § 60.4233 may not be installed after January 1, 2010.

§ 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in § 60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(2) If the engine was purchased without an EPA certificate of conformity, the engines will need to meet the performance testing requirements of 40 CFR 60.4243(b)(2)(i) and (b)(2)(ii) and the permittee will be required to conduct an initial performance test to demonstrate compliance with the emission limits from Part 60 Subpart JJJJ.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(g) It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

§ 60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in § 60.8 and under the specific conditions that are specified by Table 2 to this subpart.

b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(c) You must conduct three separate test runs for each performance test required in this section, as specified in § 60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

d) To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 1})$$

Where:

ER = Emission rate of NO_x in g/HP-hr.

C_d = Measured NO_x concentration in parts per million by volume (ppmv).

1.912×10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 2})$$

Where:

ER = Emission rate of CO in g/HP-hr.

C_d = Measured CO concentration in ppmv.

1.164×10⁻³ = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

ER = Emission rate of VOC in g/HP-hr.

C_d = VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{Mi}}{C_{Ai}} \quad (\text{Eq. 4})$$

Where:

RF_i = Response factor of compound i when measured with EPA Method 25A.

C_{Mi} = Measured concentration of compound i in ppmv as carbon.

C_{Ai} = True concentration of compound i in ppmv as carbon.

$$C_{i,corr} = RF_i \times C_{i,meas} \quad (\text{Eq. 5})$$

Where:

$C_{i,corr}$ = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

$C_{i,meas}$ = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{i,Peq} = 0.6098 \times C_{i,corr} \quad (\text{Eq. 6})$$

Where:

$C_{i,Peq}$ = Concentration of compound i in mg of propane equivalent per DSCM.

§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to § 60.4243(a)(2), documentation that the engine meets the emission standards.

(c) Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in § 60.4231 must submit an initial notification as required in § 60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.

(1) Name and address of the owner or operator;

(2) The address of the affected source;

(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(4) Emission control equipment; and

(5) Fuel used.

(d) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in § 60.4244 within 60 days after the test has been completed.

§ 60.4246 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions in §§ 60.1 through 60.19 apply to you.

4. 40 CFR Part 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

The Ohio EPA has determined that this facility, an area source of hazardous air pollutant emissions, may be subject to the requirements of Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 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 the GACT) 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 follow U.S. EPA website: <http://www.epa.gov/ttn/atw/area/arearules.html>.

Per § 63.6590(c)(1) *Stationary RICE subject to Regulations under 40 CFR Part 60*, an affected source that is a new or reconstructed stationary reciprocating internal combustion engine (RICE) located at an area source must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines, or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

For example, an affected source under 40 CFR Part 63, Subpart ZZZZ, that is subject to and meets all applicable requirements under 40 CFR Part 60, Subpart JJJJ, satisfies all applicable requirements under 40 CFR Part 63, Subpart ZZZZ. Emissions units P002 through P004 at this facility are such affected sources under 40 CFR Part 63, Subpart ZZZZ.

It is the sole responsibility of the owner or operator to comply with all applicable requirements of Subpart ZZZZ for all affected sources at this facility not subject to either 40 CFR Part 60, Subpart JJJJ or Subpart IIII.

5. OAC rule 3745-31-05(D) Special terms and conditions including federally enforceable limitations on potential to emit

This sewage treatment facility employs an anaerobic digester system to produce biogas (digester gas) as fuel for reciprocating internal combustion engine/electrical generator sets in an energy conversion process to generate electricity for exclusive internal use at the facility. Six new emissions units that comprise the Digester Gas Energy Recovery Expansion Project, include emissions units B013 and B014 (Thermal Fluid Heaters 1 and 2), emissions units P002 through P004 (New Combined Heat & Power Units 2 through 4) and emissions unit P005 (Flare #2); two existing emissions units placed in standby service, including B001 (Combined Heat & Power Unit 1) and P001 (Flare #1); and four insignificant emissions units (B011, P006, P007, and P008). P006 through P008 are three new 500 hours per year permit-by-rule natural gas-fired emergency electrical generators and B011 is an existing 500 hours per year permit-by-rule diesel-fired emergency electrical generator. These are all of the emissions units that constitute this facility.

This facility is an area source of hazardous air pollutants (HAP) and is a natural minor source for sulfur dioxide (SO₂), nitrogen oxides (NO_x), and particulate matter (all forms) emissions. This facility has the potential without restrictions to be a major Title V source for carbon monoxide (CO) and Volatile organic compound (VOC) emissions. In order for this facility to avoid Title V program requirements, the following emissions limitations, operating restrictions, monitoring and record keeping, reporting, and compliance demonstration requirements shall apply to this facility to limit the potential to emit for CO and VOC to below Title V thresholds:

a) **Emissions Limitations:**

Facility-wide CO, and VOC emissions shall not exceed, respectively, 94.92 and 17.52 tons per year, based upon rolling, 12-month summations of the monthly emission rates. To ensure federal enforceability during the first 12 calendar months of operation or the first 12 calendar



months following the issuance of this permit, the permittee shall not exceed the facility-wide emission levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Emissions (tons/yr)	
	CO	VOC

1	7.91	1.46
1-2	15.82	2.92
1-3	23.73	4.38
1-4	31.64	5.84
1-5	39.55	7.3
1-6	47.46	8.76
1-7	55.37	10.22
1-8	63.28	11.68
1-9	71.19	13.14
1-10	79.1	14.6
1-11	87.01	16.06
1-12	94.92	17.52

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the facility-wide annual limitations for CO and VOC emissions shall be based upon rolling, 12-month summations of the monthly emission rates.

b) **Operational Restrictions:**

- (1) The maximum annual operating hours for emissions units B001 and P001 shall each not exceed 40 hours, based upon a rolling, 12-month summation of the monthly operating hours.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:

Months(s)	Maximum Allowable Operating Hours
1	3.3
1-2	6.7
1-3	10.0
1-4	13.3
1-5	16.7
1-6	20.0
1-7	23.3
1-8	26.7
1-9	30.0
1-10	33.3



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1-11	36.7
1-12	40.0

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

- (2) The maximum annual million Btu heat input for emissions unit P005, while burning bio (digester) gas having a heat content of 600 Btu per cubic foot, shall not exceed 16.673, based upon a rolling, 12-month summation of the heat input figures. No other fuels are permitted or shall be burned in this emissions unit. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the heat input levels specified in the following table:

<i>Months(s)</i>	<i>Maximum Allowable Cumulative Heat Input (MMBtu)</i>
1	1389
1-2	2779
1-3	4168
1-4	5558
1-5	6947
1-6	8337
1-7	9726
1-8	11115
1-9	12505
1-10	13894
1-11	15284
1-12	16673

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual heat input limitation shall be based upon a rolling, 12-month summation of the heat input figures.

c) **Monitoring and/or Recordkeeping Requirements:**

- (1) The permittee shall maintain monthly records of the following information for facility-wide CO and VOC emissions:
- a. the total CO and VOC emissions for each month of operations; and

- b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summations of the CO and VOC emissions.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the facility-wide cumulative CO and VOC emissions for each calendar month.

- (2) The permittee shall maintain monthly records of the following information:

- a. the operating hours for each month for each of emissions units B001 and P001;
- b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours for each of emissions units B001 and P001

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month for each of emissions units B001 and P001.

- (3) The permittee shall maintain monthly records of the following information:

- a. the heat input (million Btu) for each month of operation for emissions unit P005;
- b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the heat input (million Btu) figures for emissions unit P005.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative heat input (million Btu) for each calendar month for emissions unit P005.

d) **Reporting Requirements:**

- (1) 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.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - (a) all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. all exceedances of the rolling, 12-month facility-wide limitations for CO, and VOC emissions and, for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the facility-wide maximum allowable cumulative levels for CO and VOC emissions, as specified above in term 5.a)(1) **Emissions Limitations** of the “**B. Facility-Wide Terms and Conditions**”;



- ii. all exceedances of the rolling, 12-month limitation on the hours of operation for each of emissions units B001 and P001 for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative hours of operation for each of emissions units B001 and P001, as specified above in terms 5.b)(1) through (3) **Operational Restrictions** of the “**B. Facility-Wide Terms and Conditions**”; and
 - iii. all exceedances of the rolling, 12-month limitation on heat input (million Btu) for emissions unit P005; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative heat input (million Btu) levels, as specified above in term 5.b)(4) **Operational Restrictions** of the “**B. Facility-Wide Terms and Conditions**”.
- (b) the probable cause of each deviation (excursion);
 - (c) any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - (d) the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

e) **Compliance Demonstration Requirements:**

Compliance with the above annual facility-wide emissions limitations, based upon rolling, 12-month summations of the monthly emission rates, shall be demonstrated in accordance with the above terms 5.c)(1) through (3) **Monitoring and/or Recordkeeping Requirements** of the “**B. Facility-Wide Terms and Conditions**”) using the following synthetic minor potential to emit strategy.

<i>Emission Unit</i>	<i>Fuel</i>	<i>Input</i>	<i>Pollutant</i>	<i>Rate</i>	<i>Units</i>	<i>PTE (lbs/hr)</i>	<i>PTE (tons/yr)</i>	<i>Operation Restriction (hours/yr)</i>	<i>Permitted (tons/yr)</i>
B001 existing PTIO	Biogas	468 hp	CO	B001	g/hp-hr	3.20	14.02	40	0.06
			NOx	B001	g/hp-hr	1.20	5.26	40	0.02
			SO2	B001	g/hp-hr	0.00	0.00	40	0.00
			PM 10	B001	g/hp-hr	0.00	0.00	40	0.00
			VOC	B001	g/hp-hr	0.00	0.00	40	0.00
			HAP	B001	g/hp-hr	0.00	0.00	40	0.00
P002	Biogas	831 hp	CO	2.5	g/hp-hr	4.58	20.06	8760	20.06



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new FEPTIO			NOx	1.1	g/hp-hr	2.02	8.83	8760	8.83
			SO2	0	g/hp-hr	0.00	0.00	8760	0.00
			PM 10	0	g/hp-hr	0.00	0.00	8760	0.00
			VOC	0.20	g/hp-hr	0.37	1.60	8760	1.60
			HAP	0.22	lb/MMBTU	1.12	4.89	8760	4.89
P003 new FEPTIO	Biogas	831 hp	CO	2.5	g/hp-hr	4.58	20.06	8760	20.06
			NOx	1.1	g/hp-hr	2.02	8.83	8760	8.83
			SO2	0	gm/hp-hr	0.00	0.00	8760	0.00
			PM 10	0	g/hp-hr	0.00	0.00	8760	0.00
			VOC	0.20	g/hp-hr	0.37	1.60	8760	1.60
P004 new FEPTIO	Biogas	831 hp	HAP	0.22	lb/MMBTU	1.12	4.89	8760	4.89
			CO	2.5	g/hp-hr	4.58	20.06	8760	20.06
			NOx	1.1	g/hp-hr	2.02	8.83	8760	8.83
			SO2	0	g/hp-hr	0.00	0.00	8760	0.00
			PM 10	0	g/hp-hr	0.00	0.00	8760	0.00
P001 existing PTIO	Biogas	7.54 MMBTU/hr	VOC	0.20	g/hp-hr	0.37	1.60	8760	1.60
			HAP	0.22	lb/MMBTU	1.12	4.89	8760	4.89
			CO	¹ P001	lb/MMBTU	1.50	6.57	40	0.03
			NOx	¹ P001	lb/MMBTU	0.50	2.19	40	0.01
			SO2	¹ P001	lb/MMBTU	0.00	0.00	40	0.00
P005 new FEPTIO	Biogas	33.345 MMBTU/hr	PM 10	¹ P001	lb/MMBTU	0.00	0.00	40	0.00
			VOC	¹ P001	lb/MMBTU	0.00	0.00	40	0.00
			HAP	¹ P001	lb/MMBTU	0.00	0.00	40	0.00
			CO	0.3	lb/MMBTU	10.00	43.82	³ 1000	2.50
			NOx	0.06	lb/MMBTU	2.00	8.76	³ 1000	0.50
B013 new FEPTIO	Biogas or Natural Gas	10.75 MMBTU/hr	SO2	0	lb/MMBTU	0.00	0.00	³ 1000	0.00
			PM 10	0	lb/MMBTU	0.00	0.00	³ 1000	0.00
			VOC	² 1.156	lb/MMBTU	² 38.57	168.95	³ 1000	9.64
			HAP	0.011326	lb/MMBTU	0.38	1.65	³ 1000	0.09
			CO	150	PPMv	3.27	14.33	8760	6.13
B014 new FEPTIO	Biogas or Natural Gas	12.50 MMBTU/hr	NOx	100	PPMv	3.58	15.70	8760	6.71
			SO2	0	PPMv	0	0.00	8760	0.00
			PM 10	0	lb/MMBTU	0.00	0.00	8760	0.00
			VOC	0.003	lb/MMBTU	0.03	0.14	8760	0.06
			HAP	0.011326	lb/MMBTU	0.12	0.53	8760	0.23
B011 existing PBR	Diesel	54 hp	CO	0.00668	lb/hp-hr	0.36	0.09	500	0.09
			NOx	0.031	lb/hp-hr	1.66	0.42	500	0.42
			SO2	0.00205	lb/hp-hr	0.11	0.03	500	0.03
			PM 10	0.00220	lb/hp-hr	0.12	0.03	500	0.03
			VOC	0.00207	lb/hphr	0.11	0.03	500	0.03
P006 new PBR	Natural Gas	1.00 MMBTU/hr	HAP	0.000463	lb/hp-hr	0.02	0.01	500	0.01
			CO	0.557	lb/MMBTU	0.56	0.14	500	0.14
			NOx	0.847	lb/MMBTU	0.85	0.21	500	0.21
			SO2	0.0006	lb/MMBTU	0.00	0.00	500	0.00
			PM 10	0.00008	lb/MMBTU	0.00	0.00	500	0.00



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P007 new PBR	Natural Gas	6.00 MMBTU/ hr	VOC	1.47	lb/MMBTU	1.47	0.37	500	0.37
			HAP	0.120	lb/MMBTU	0.12	0.03	500	0.03
			CO	0.557	lb/MMBTU	3.34	0.84	500	0.84
			NOx	0.847	lb/MMBTU	5.08	1.27	500	1.27
			SO2	0.0006	lb/MMBTU	0.00	0.00	500	0.00
			PM 10	0.00008	lb/MMBTU	0.00	0.00	500	0.00
			VOC	1.47	lb/MMBTU	8.82	2.21	500	2.21
			HAP	0.120	lb/MMBTU	0.72	0.18	500	0.18
P008 new PBR	Natural Gas	0.42 MMBTU/ hr	CO	0.557	lb/MMBTU	0.23	0.06	500	0.06
			NOx	0.847	lb/MMBTU	0.36	0.09	500	0.09
			SO2	0.0006	lb/MMBTU	0.00	0.00	500	0.00
			PM 10	0.00008	lb/MMBTU	0.00	0.00	500	0.00
			VOC	1.47	lb/MMBTU	0.62	0.15	500	0.15
			HAP	0.120	lb/MMBTU	0.05	0.01	500	0.01

¹ Emission rates per existing permit P0109405.

² Emission rate from 1% maximum inlet, per manufacturer.

³ Synthetic minor restriction is 16,673 MMBtu/yr, operating the flare at 50% capacity for 1000 hours would yield 16,673 MMBtu.

Total Facility Wide Emissions with Applicable Synthetic Minor Threshold			
<i>Pollutant</i>	<i>PTE tons/yr</i>	<i>Permitted tons/yr</i>	<i>SM Threshold</i>
CO	156.73	94.92	<100 ton/yr
NOx	78.65	62.98	<100 ton/yr
SO2	0.03	0.03	<100 ton/yr
PM 10	0.03	0.03	<100 ton/yr
VOC	176.83	17.52	<100 ton/yr
HAP	17.71	16.15	<25 ton/yr
Ethane (largest HAP)	7.65	7.22	<10 ton/yr

Synthetic Minor Operation Limits		
<i>Emission Unit ID</i>	<i>Annual Operation Limit</i>	<i>Units</i>
B001	40	Hours
P002	8,760	Hours
P003	8,760	Hours
P004	8,760	Hours
P001	40	Hours
P005	16,673	MMBTU
B013	8,760	Hours
B014	8,760	Hours
B011	500	Hours
P006	500	Hours
P007	500	Hours
P008	500	Hours



Draft Permit-to-Install and Operate
City of Akron Water Reclamation Facility

Permit Number: P0114966

Facility ID: 1677010255

Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions



1. P005, Flare 2 is a constituent of the Digester Gas Energy Recovery Expansion Project to increase the capacity of the anaerobic digester system at this facility.

Operations, Property and/or Equipment Description:

Digester gas flare, 33.345 million Btu per hour heat input, burns digester gas having a heat content of 600 Btu per cubic foot. This flare will serve as process equipment to change the digester gas to a non inflammable state only during initial project startup and limited operation afterward. No other gases burned in this emissions unit, except natural gas for the ignition pilot. The operation of this flare meets the definition of "Process".

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Federally enforceable limitations on potential to emit to avoid Title V program requirements]	See term #5 of " B. Facility-Wide Terms and Conditions " above.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001 [Best Available Technology]	The "Best Available Technology" (BAT) for this emissions unit has been determined to be compliance with the annual emission limitations as established pursuant to OAC rule 3745-31-05(D). See b)(2)a
c.	OAC rule 3745-31-05(A)(3), as effective 12/1/2006.	See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-11(B)	The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate is equal to zero. Process weight is defined in OAC rule 3745-17-01(B)(17).
e.	OAC rule 3745-17-07(B)(1)	This emissions unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.
f.	OAC rule 3745-18-06(C)	Process equipment which has a rated capacity equal to, or less than, one thousand pounds per hour process weight input is exempt from paragraph (E) of this rule and from rules 3745-18-07 to 3745-18-94 of the Administrative Code. Per OAC rule 3745-18-01(B)(13), "Process" means any source operation including any equipment, devices, or contrivances and all appurtenances thereto, for changing any material whatever or for storage or handling of any material, the use of which may cause the discharge of an air contaminant into the open air, but not including that equipment defined as a fossil fuel fired steam generator.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) emission limitation/control measure requirements pursuant to paragraph (A)(3) of Ohio Administrative Code (OAC) rule 3745-31-05, 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 employment of BAT is not a requirement if the air contaminant source was installed or modified on or after August 3, 2006 and has the potential to emit, taking into account any federally enforceable limitations on the potential to emit and/or any air pollution controls

installed on the source, less than ten tons per year for each air contaminant or precursor of an air contaminant for which a national ambient air quality standard (NAAQS) has been adopted under the Clean Air Act. 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 employ 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, employment of BAT is no longer a requirement based upon the above-mentioned conditions.

- b. The following rule paragraphs apply once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:

Best Available Technology (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 any federally enforceable limitations on the potential to emit and/or any 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.

BAT requirements pursuant to paragraph (A)(3) of OAC rule 3745-31-05(A)(3), as effective December 1, 2006, do not apply to the emissions of any air contaminant from this air contaminant source, since the potential to emit (PTE) is less than 10 tons per year for each air contaminant, taking into consideration federally enforceable emission limitations and control requirements established pursuant to OAC rule 3745-31-05(D) in this permit.

The emission limitations and control requirements established pursuant to OAC rule 3745-31-05(D) in this permit will remain applicable after the above SIP revisions are approved by the U.S. EPA.

- c. Anaerobic digesters, including all associated equipment and grounds, shall be designed, operated, and maintained so as to prevent the emission of objectionable odors.
- d. The emissions from the digestion process shall be vented to the flare during any instance when digester gas is present in the feedstock equilibrium tank, primary digester, or dual purpose tank and the combined heat and power unit is not firing digester gas.
- e. The permittee shall properly install, operate, and maintain a device to continuously monitor the flare pilot flame or electric arc ignition when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
- f. The permittee shall apply for and, if required, obtain a modification to this permit or obtain a new final federally enforceable permit-to-install and operate (FEPTIO) prior to making any change to equipment, change in material(s) processed, fuels

burned, change in the method of operation, or any other change to this emissions unit that results in an increase in the allowable emissions or results in an increase in emissions of greater than the de minimis levels in OAC rule 3745-15-05 for any type of air contaminant not previously emitted.

c) Operational Restrictions

- (1) Digester gas combusted in this emissions unit shall not exceed 1000 parts per million on a volume basis (ppm_v) of hydrogen sulfide.
- (2) Digester gas combusted in the flare serving this emissions unit shall not be less than 500 Btu/scf.
- (2) A pilot flame shall be maintained at all times in the flare's pilot light burner or the arcing of the flare's electric arc ignition system shall pulse continually when the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall monitor and record hydrogen sulfide concentrations when operating the emissions unit with digester gas using one of the two following options:

Option 1: Weekly gas detector tube sampling. The accuracy of gas detector tubes is presumed to be $\pm 10\%$, unless the permittee is able to demonstrate better accuracy of the detector tubes compared to a certified gas standard. The permittee shall perform gas detector tube monitoring in accordance with the manufacturer's instructions for use of the detector tubes and associated sampling system. Any deviations from the manufacturer's instructions should be recorded with the concentration results of the sampling.

Option 2: Continuous digester gas monitoring system. The permittee may install a sampling and analysis system to continuously monitor and record the H₂S content of the digester gas. The permittee shall properly install, operate, and maintain a continuous digester gas H₂S monitoring device and recorder that measures and records the H₂S concentrations in the digester gas when the emissions unit is in operation, including periods of startup and shutdown. The H₂S 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 H₂S concentration. The H₂S monitoring device and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee.

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

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

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

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

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

- (2) The permittee shall maintain monthly records of the heat content of the digester gas, in Btu/scf.
 - (3) The permittee shall maintain daily records of all periods of time during which the electric arc system was inoperable or there was no flare pilot flame when digester gas was present in the feedstock equilibrium tank, primary digester, or dual purpose tank, and the combined heat and power unit was not firing digester gas.
 - (4) The permittee shall monitor and record the volume of digester gas flared in standard cubic feet per year, and shall calculate and record the annual heat input to the flare in million Btu.
- e) Reporting Requirements
- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services 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.
 - (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements in d)(1), d)(2) and d)(3):
 - a. all periods of time during which the flare's electric arc ignition system was not functioning properly or there was no flare pilot flame when digester gas was present in the feedstock equilibrium tank, primary digester, or dual purpose tank, and the combined heat and power unit was not firing digester gas;
 - b. each month during which digester gas with a minimum heat content of less than 500 Btu / scf was burned in this emissions unit;
 - c. each period during which digester gas containing an H₂S concentration greater than allowed by c)(1) was burned.
- 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:

Refer to term #5 of "**B. Facility-Wide Terms and Conditions**" above for applicable emissions limitations.

Applicable compliance method:

Refer to term #5 of "**B. Facility-Wide Terms and Conditions**" above for associated applicable compliance methods.

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

2. Emissions Unit Group - New Combined Heat & Power Units: P002, P003, P004 are constituents of the Digester Gas Energy Recovery Expansion Project to increase the capacity of the anaerobic digester system at this facility.

EU ID	Operations, Property and/or Equipment Description
P002	Combined Heat and Power Unit #2 (CHPU #2) 831 brake horsepower, 4.975 million Btu per hour heat input, 4-stroke/lean-burn, spark ignition (SI) reciprocating internal combustion engine/600 KW electrical generator set, fired exclusively with digester gas having a heat content of 600 Btu per cubic foot. No other fuels are burned in this emissions unit. Emissions controlled by combustion air/fuel ratio technique.
P003	Combined Heat and Power Unit #3 (CHPU #3) 831 brake horsepower, 4.975 million Btu per hour heat input, 4-stroke/lean-burn, spark ignition (SI) reciprocating internal combustion engine/600 KW electrical generator set, fired exclusively with digester gas having a heat content of 600 Btu per cubic foot. No other fuels are burned in this emissions unit. Emissions controlled by combustion air/fuel ratio technique.
P004	Combined Heat and Power Unit #4 (CHPU #4) 831 brake horsepower, 4.975 million Btu per hour heat input, 4-stroke/lean-burn, spark ignition (SI) reciprocating internal combustion engine/600 KW electrical generator set, fired exclusively with digester gas having a heat content of 600 Btu per cubic foot. No other fuels are burned in this emissions unit. Emissions controlled by combustion air/fuel ratio technique.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Federally enforceable limitations on	See term #5 of “ B. Facility-Wide Terms and Conditions ” above.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	potential to emit to avoid Title V program requirements]	
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001 [Best Available Technology]	The “Best Available Technology” (BAT) for this emissions unit has been determined to be compliance with OAC rule 3745-31-05(D) and the terms and conditions of this permit. See b)(2)a.
c.	OAC rule 3745-31-05(A)(3), as effective 12/1/2006	See b)(2)b.
d.	OAC rule 3745-17-07(A)(1)	Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
e.	OAC rule 3745-17-11(B)(5)(b)	Particulate emissions (PE) shall not exceed 0.062 pound per million Btu of actual heat input for a stationary large internal combustion engine.
f.	40 CFR Part 60, Subpart JJJJ [In accordance with 40 CFR 60.4230(a)(4)(i), this emissions unit is a spark ignition engine greater than or equal to 500 horsepower (HP)]	See term #3 of “ B. Facility-Wide Terms and Conditions ” above.
g.	40 CFR Part 60, Subpart A [General Provisions]	Per § 60.4246, Table 3 to Subpart JJJJ of 40 CFR Part 60 – Applicability of Subpart A to Subpart JJJJ shows which parts of the General Provisions in 40 CFR 60.1-19 apply.
h.	OAC rule 3745-14-12	None. This emissions unit is neither an “affected engine” per the definition under OAC rule 3745-14-01(B)(4)(a) nor is it a “large NOx SIP call engine” per the definition under OAC rule 3745-14-01(B)(4)(d).
i.	OAC rule 3745-18-06(B)	Fuel burning equipment, stationary gas turbines, jet engine test stands and stationary internal combustion engines which have rated heat input capacities equal to, or less than, ten MM Btu per hour total rated capacity are exempt from paragraphs (D), (F) and (G) of this rule and from rules 3745-18-07 to 3745-18-94 of the Administrative Code.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
j.	OAC rule 3745-110-03(J)(3)	The requirements of paragraphs (A) to (F) of OAC rule 3745-110-03 shall not apply to any stationary internal combustion engine having an energy output capacity of less than two thousand horsepower.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) emission limitation/control measure requirements pursuant to paragraph (A)(3) of Ohio Administrative Code (OAC) rule 3745-31-05, 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 employment of BAT is not a requirement if the air contaminant source was installed or modified on or after August 3, 2006 and has the potential to emit, taking into account any federally enforceable limitations on the potential to emit and/or any air pollution controls installed on the source, less than ten tons per year for each air contaminant or precursor of an air contaminant for which a national ambient air quality standard (NAAQS) has been adopted under the Clean Air Act. 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 employ 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, employment of BAT is no longer a requirement based upon the above-mentioned conditions.

- b. The following rule paragraphs apply once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:

Best Available Technology (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 any federally enforceable limitations on the potential to emit and/or any 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.

BAT requirements pursuant to paragraph (A)(3) of OAC rule 3745-31-05(A)(3), as effective December 1, 2006, do apply to the carbon monoxide emissions from this air contaminant source, since the potential to emit (PTE), taking into consideration federally enforceable emission limitations and control requirements established pursuant to OAC rule 3745-31-05(D) in this permit, is more than 10 tons per year.

BAT requirements pursuant to paragraph (A)(3) of OAC rule 3745-31-05(A)(3), as effective December 1, 2006, do not apply to the emissions of any air

contaminant from this air contaminant source, since the PTE is less than 10 tons per year for emissions of each air contaminant, taking into consideration federally enforceable emission limitations and control requirements established pursuant to OAC rule 3745-31-05(D) in this permit.

The emission limitations and control requirements established pursuant to OAC rule 3745-31-05(D) in this permit will remain applicable after the above SIP revisions are approved by the U.S. EPA.

- c. Anaerobic digesters, including all associated equipment and grounds, shall be designed, operated, and maintained so as to prevent the emission of objectionable odors.
- d. The emissions from the digestion process shall be vented to the flare (Flare 2, emissions unit P005) during any instance when digester gas is present in the feedstock equilibrium tank, primary digester, or dual purpose tank and the new combined heat and power unit is not firing digester gas.
- e. The applicable PE limit from OAC rule 3745-17-11(B)(5)(b) is greater than the potential to emit for this emissions unit. Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure ongoing compliance with this PE limit.
- f. The permittee shall apply for and, if required, obtain a modification to this permit or obtain a new final federally enforceable permit-to-install and operate (FEPTIO) prior to making any change to equipment, change in fuels burned, change in the method of operation, or any other change that results in an increase in the allowable emissions or results in an increase in emissions of greater than the de minimis levels in OAC rule 3745-15-05 for any type of air contaminant not previously emitted.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas, or digester gas with a minimum heat content of 500 Btu / scf, in this emissions unit.
- (2) Digester gas combusted in this emissions unit shall not exceed 1000 parts per million on a volume basis (ppmv) of hydrogen sulfide.
- (3) The height of the stack on this emissions unit shall be at least 18 feet, measured from the ground and 150 feet from the property line.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

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

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

- (2) For each day during which the permittee burns a fuel other than digester gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (3) The permittee shall maintain monthly records of the digester gas fuel usage in this unit in millions of standard cubic feet.
- (4) The permittee shall monitor and record hydrogen sulfide concentrations when operating the emissions unit with digester gas using one of the two following options:

Option 1: Weekly gas detector tube sampling. The accuracy of gas detector tubes is presumed to be $\pm 10\%$, unless the permittee is able to demonstrate better accuracy of the detector tubes compared to a certified gas standard. The permittee shall perform gas detector tube monitoring in accordance with the manufacturer's instructions for use of the detector tubes and associated sampling system. Any deviations from the manufacturer's instructions should be recorded with the concentration results of the sampling.

Option 2: Continuous digester gas monitoring system. The permittee may install a sampling and analysis system to continuously monitor and record the H₂S content of the digester gas. The permittee shall properly install, operate, and maintain a continuous digester gas H₂S monitoring device and recorder that measures and records the H₂S concentrations in the digester gas when the emissions unit is in operation, including

periods of startup and shutdown. The H₂S 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 H₂S concentration. The H₂S monitoring device and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee.

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

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

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

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

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

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

e) Reporting Requirements

- (1) Except as otherwise noted in this permit, 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.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services 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.
- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements in d)(2), d)(6), and d)(7):
 - a. all periods of time during which the permittee burns a fuel other than digester gas in this emissions unit and the type and quantity of fuel burned;
 - b. each month during which digester gas with a minimum heat content of less than 500 Btu / scf was burned in this emissions unit;
 - c. each period during which digester gas containing an H₂S concentration greater than allowed by c)(2) was burned.

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:

Visible particulate emissions from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9.
 - b. Emission Limitation:

Particulate emissions (PE) shall not exceed 0.062 pound per million Btu of actual heat input for a stationary large internal combustion engine.

Applicable Compliance Method:

If required, compliance shall be determined in accordance with the requirements in 40 CFR Part 60, Appendix A, Method 5 and the procedures specified in OAC rule 3745-17-03(B)(10).



c. Emissions limitation:

Refer to term #5 of "**B. Facility-Wide Terms and Conditions**" above for other applicable emissions limitations.

Applicable compliance method:

Refer to term #5 of "**B. Facility-Wide Terms and Conditions**" above for associated applicable compliance methods.

g) Miscellaneous Requirements

- (1) None.

3. Emissions Unit Group -Thermal Fluid Heaters: B013, B014 are constituents of the Digester Gas Energy Recovery Expansion Project to increase the capacity of the anaerobic digester system at this facility.

EU ID	Operations, Property and/or Equipment Description
B013	Thermal Fluid Heater #1--Non-steam hydronic boiler 10.75 million Btu per hour heat input, burns natural gas or digester gas having a heat content of 600 Btu per cubic foot. No other fuels burned in this emissions unit. This emissions unit provides indirect heat transfer to the anaerobic digestion system. Emissions uncontrolled.
B014	Thermal Fluid Heater #2--Non-steam hydronic boiler 12.5 million Btu per hour heat input, burns natural gas or digester gas having a heat content of 600 Btu per cubic foot. No other fuels burned in this emissions unit. This emissions unit provides indirect heat transfer to the anaerobic digestion system. Emissions uncontrolled.

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

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

a. None.

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

a. None

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [Federally enforceable limitations on potential to emit to avoid Title V program requirements]	See term #5 of “ B. Facility-Wide Terms and Conditions ” above.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001 [Best Available Technology]	The “Best Available Technology” (BAT) for this emissions unit has been determined to be compliance with OAC rule 3745-31-05(D) and the terms and conditions of this permit. See b)(2)a.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-31-05(A)(3), as effective 12/1/2006	See b)(2)b.
c..	OAC rule 3745-17-07(B)(1)	Visible particulate emissions (PE) from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
d.	OAC rule 3745-17-10(B)(1)	Emissions shall not exceed 0.020 pound PE per million BTU actual heat input.
e.	OAC rule 3745-18-06(A) [Burning natural gas]	Fuel burning equipment, stationary gas turbines, jet engine test stands and stationary internal combustion engines are exempt from paragraphs (D), (F) and (G) of this rule and from rules 3745-18-07 to 3745-18-94 of the Administrative Code during any calendar day in which natural gas is the only fuel burned.
f.	OAC rule 3745-18-83(A)(1) [Burning digester gas]	For fossil fuel fired steam generating units with a total rated heat input capacity between ten and three hundred MM Btu per hour, the emission rate in pounds of sulfur dioxide per MM Btu actual heat input shall be calculated in accordance with the following equation: $EL = 17.55 * Qm^{-0.3933}$ where: Qm is the total rated heat input capacity in MM Btu per hour, and EL is the allowable emission rate in pounds of sulfur dioxide per MM Btu actual heat input.
g.	40 CFR Part 60, Subpart Dc	See term #2 of " B. Facility-Wide Terms and Conditions " above.
h.	40 CFR Part 60, Subpart A [General Provisions]	Refer to 40 CFR Part 60, Subpart Dc to see which parts of the General Provisions in 40 CFR 60.1-19 apply.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) emission limitation/control measure requirements pursuant to paragraph (A)(3) of Ohio Administrative Code (OAC) rule 3745-31-05, 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 employment of BAT is not a requirement if the air contaminant source was installed or modified on or after August 3, 2006 and has the potential to emit, taking into account any federally enforceable limitations on the potential to emit and/or any air pollution controls installed on the source, less than ten tons per year for each air contaminant or precursor of an air contaminant for which a national ambient air quality standard (NAAQS) has been adopted under the Clean Air Act. 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 employ 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, employment of BAT is no longer a requirement based upon the above-mentioned conditions.

- b. The following rule paragraphs apply once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:

Best Available Technology (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 any federally enforceable limitations on the potential to emit and/or any 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.

BAT requirements pursuant to paragraph (A)(3) of OAC rule 3745-31-05(A)(3), as effective December 1, 2006, do not apply to the emissions of any air contaminant from this air contaminant source, since the potential to emit (PTE) is less than 10 tons per year for each air contaminant, taking into consideration federally enforceable emission limitations and control requirements established pursuant to OAC rule 3745-31-05(D) in this permit.

The emission limitations and control requirements established pursuant to OAC rule 3745-31-05(D) in this permit will remain applicable after the above SIP revisions are approved by the U.S. EPA.

- c. Anaerobic digesters, including all associated equipment and grounds, shall be designed, operated, and maintained so as to prevent the emission of objectionable odors.
- d. The applicable PE limit from OAC rule 3745-17-10(B)(1) and the applicable sulfur dioxide emission limits from OAC rule 3745-18-83(A)(1) are greater than the potential to emit for this emissions unit. Therefore, no monitoring, record keeping or reporting requirements are necessary to ensure ongoing compliance with these emission limits.
- e. The permittee shall apply for and, if required, obtain a modification to this permit or obtain a new final federally enforceable permit-to-install and operate (FEPTIO)

prior to making any change to equipment, change in fuels burned, change in the method of operation, or any other change that results in an increase in the allowable emissions or results in an increase in emissions of greater than the de minimis levels in OAC rule 3745-15-05 for any type of air contaminant not previously emitted.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas, or digester gas with a minimum heat content of 500 Btu / scf, in this emissions unit.
- (2) Digester gas combusted in this emissions unit shall not exceed 1000 parts per million on a volume basis (ppm_v) of hydrogen sulfide.

d) Monitoring and/or Recordkeeping Requirements

- (3) For each day the permittee burns a fuel other than natural gas or digester gas in this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall monitor and record hydrogen sulfide concentrations when operating the emissions unit with digester gas using one of the two following options:

Option 1: Weekly gas detector tube sampling. The accuracy of gas detector tubes is presumed to be $\pm 10\%$, unless the permittee is able to demonstrate better accuracy of the detector tubes compared to a certified gas standard. The permittee shall perform gas detector tube monitoring in accordance with the manufacturer's instructions for use of the detector tubes and associated sampling system. Any deviations from the manufacturer's instructions should be recorded with the concentration results of the sampling.

Option 2: Continuous digester gas monitoring system. The permittee may install a sampling and analysis system to continuously monitor and record the H₂S content of the digester gas. The permittee shall properly install, operate, and maintain a continuous digester gas H₂S monitoring device and recorder that measures and records the H₂S concentrations in the digester gas when the emissions unit is in operation, including periods of startup and shutdown. The H₂S 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 H₂S concentration. The H₂S monitoring device and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee.

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

- a. the date and time the deviation began;

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

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

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

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

- (3) The permittee shall maintain monthly records of the heat content of the digester gas, in Btu / scf.
- (4) The permittee shall maintain monthly records of the natural gas and digester gas fuel usage in this unit in millions of standard cubic feet.

e) Reporting Requirements

- (1) Except as otherwise noted in this permit, 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.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services 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.

- (3) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements in d)(1), d)(2) and d)(3):
- a. all periods of time during which the permittee burns a fuel other than natural gas or digester gas in this emissions unit and the type and quantity of fuel burned;
 - b. each month during which digester gas with a minimum heat content of less than 500 Btu / scf was burned in this emissions unit;
 - c. each period during which digester gas containing an H₂S concentration greater than allowed by c)(2) was burned.
- 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 limitations:
Emissions of SO₂ shall not exceed the following (assuming separate stacks):
6.9 pounds per million Btu heat input, from emissions unit B013, and
6.5 pounds per million Btu heat input, from emissions unit B014.
Applicable compliance method:
If required, SO₂ emissions shall be determined according to test Methods 1 - 4, and 6 as set forth in 40 CFR, Part 60 Appendix A.
 - b. Emissions limitation:
Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
Applicable compliance method:
If required, compliance with the stack visible PE limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 of 40 CFR Part 60, Appendix A.
 - c. Emissions limitation:
Emissions shall not exceed 0.020 pound PE per million BTU actual heat input.
Applicable compliance method:
If required, compliance shall be determined in accordance with the requirements in 40 CFR Part 60, Appendix A, Methods 1 - 5 and the procedures specified in OAC rule 3745-17-03(B)(9).



d. Emissions limitation:

Refer to term #5 of "**B. Facility-Wide Terms and Conditions**" above for other applicable emissions limitations.

Applicable compliance method:

Refer to term #5 of "**B. Facility-Wide Terms and Conditions**" above for associated applicable compliance methods.

g) Miscellaneous Requirements

(1) None.