



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

9/26/2013

Certified Mail

Nathan Wheldon
Seneca Gas Plant
1515 Arapahoe Street
Suite 1600 - Tower 1
Denver, CO 80202-2137

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

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0661005008
Permit Number: P0113977
Permit Type: Initial Installation
County: Noble

Dear Permit Holder:

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

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

How to appeal this permit

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

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

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

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

If you have any questions, please contact Ohio EPA DAPC, Southeast District Office at (740)385-8501 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-SEDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Seneca Gas Plant**

Facility ID:	0661005008
Permit Number:	P0113977
Permit Type:	Initial Installation
Issued:	9/26/2013
Effective:	9/26/2013
Expiration:	9/26/2023



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

for
Seneca Gas Plant

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Authorization

Facility ID: 0661005008
Application Number(s): A0046880
Permit Number: P0113977
Permit Description: MarkWest Utica EMG, L.L.C. (MarkWest) plans to construct a greenfield natural gas processing plant in Noble County south of Senecaville Lake (Seneca Gas Processing Plant) to process field gas mainly gathered from the Utica shale formation. Plants #1 and #2 at the Seneca Gas Processing Plant will each process up to 230 million standard cubic feet per day (mmscfd) of field gas to produce pipeline grade natural gas and a mixture of heavier hydrocarbons (i.e., natural gas liquids [NGLs]) intended for delivery via pipeline to off-site fractionation facilities.
Permit Type: Initial Installation
Permit Fee: \$3,400.00
Issue Date: 9/26/2013
Effective Date: 9/26/2013
Expiration Date: 9/26/2023
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Seneca Gas Plant
Zep Road
Summerfield, OH 43788

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

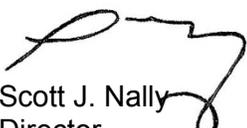
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southeast District Office
2195 Front Street
Logan, OH 43138
(740)385-8501

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0113977
Permit Description: MarkWest Utica EMG, L.L.C. (MarkWest) plans to construct a greenfield natural gas processing plant in Noble County south of Senecaville Lake (Seneca Gas Processing Plant) to process field gas mainly gathered from the Utica shale formation. Plants #1 and #2 at the Seneca Gas Processing Plant will each process up to 230 million standard cubic feet per day (mmscf) of field gas to produce pipeline grade natural gas and a mixture of heavier hydrocarbons (i.e., natural gas liquids [NGLs]) intended for delivery via pipeline to off-site fractionation facilities.

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

- Emissions Unit ID:** B003
 Company Equipment ID: B003
 Superseded Permit Number:
 General Permit Category and Type: Not Applicable
- Emissions Unit ID:** P003
 Company Equipment ID: P003
 Superseded Permit Number:
 General Permit Category and Type: Not Applicable
- Emissions Unit ID:** P004
 Company Equipment ID: P004
 Superseded Permit Number:
 General Permit Category and Type: Not Applicable
- Emissions Unit ID:** P801
 Company Equipment ID: P801
 Superseded Permit Number:
 General Permit Category and Type: Not Applicable

Group Name: Hot Oil Heaters

Emissions Unit ID:	B004
Company Equipment ID:	B004
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B005
Company Equipment ID:	B005
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: NG Engines

Emissions Unit ID:	P001
Company Equipment ID:	P001
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P002
Company Equipment ID:	P002
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate

Seneca Gas Plant

Permit Number: P0113977

Facility ID: 0661005008

Effective Date: 9/26/2013

Group Name: Regeneration Heaters

Emissions Unit ID:	B001
Company Equipment ID:	B001
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B002
Company Equipment ID:	B002
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
Seneca Gas Plant
Permit Number: P0113977
Facility ID: 0661005008
Effective Date: 9/26/2013

A. Standard Terms and Conditions



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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

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

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

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



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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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



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

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

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

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

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

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

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

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting¹ a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

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

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

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



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

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

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

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

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

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



Final Permit-to-Install and Operate
Seneca Gas Plant
Permit Number: P0113977
Facility ID: 0661005008
Effective Date: 9/26/2013

B. Facility-Wide Terms and Conditions



Final Permit-to-Install and Operate

Seneca Gas Plant

Permit Number: P0113977

Facility ID: 0661005008

Effective Date: 9/26/2013

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. Emissions units P001 and P002 contained in this permit are subject to 40 CFR Part 60, Subpart JJJJ. Emissions unit P801 contained in this permit is subject to 40 CFR Part 60, Subparts OOOO and VV. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulation (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the appropriate Ohio EPA District office or local air agency.
3. The Ohio EPA has determined that this facility may be subject to the requirements of an area source MACT/GACT rule that the Ohio EPA does not have the delegated authority to implement. Although Ohio EPA has determined that an area source MACT (also known as 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>.
4. The requirements of this permit are not intended to supersede any Ohio Department of Natural Resources requirements.
5. The permittee remains subject to all applicable federal law and regulations and all applicable provisions of the Ohio State Implementation Plan as approved by the Administrator of the U.S. EPA. The provisions of the Ohio State Implementation Plan are independently enforceable by the U.S. EPA.



Final Permit-to-Install and Operate
Seneca Gas Plant
Permit Number: P0113977
Facility ID: 0661005008
Effective Date: 9/26/2013

C. Emissions Unit Terms and Conditions



1. **B003, Stabilization Heater**

Operations, Property and/or Equipment Description:

Stabilization Heater - Natural gas-fired process heater rated at a heat input capacity of 22.65 MMBtu/hr supporting the operation of the stabilizer system.

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

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

a. None.

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

a. None.

b) **Applicable Emissions Limitations and/or Control Requirements**

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Nitrogen oxides (NO _x) emissions shall not exceed 0.03 lb/million BTU and 2.98 tons per year. Carbon monoxide (CO) emissions shall not exceed 0.06 lb/million BTU and 5.95 tons per year. Sulfur dioxide (SO ₂) emissions shall not exceed 0.6978 lb/million BTU and 0.06 ton per year. Particulate emissions (PE) shall not exceed 0.00745 lb/million BTU and 0.74 ton per year. Volatile organic compound (VOC) emissions shall not exceed 0.0054



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		lb/million BTU and 0.53 ton per year. The requirements of this rule include compliance with 3745-17-10(B)(1). See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(b) as effective 12/01/06	See b)(2)b. below.
c.	OAC rule 3745-17-07(A)	Visible PE from any stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-10(B)(1)	PE shall not exceed 0.020 lb/million BTU of actual heat input. This emission limitation is less stringent than the limitation listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.

(2) Additional Terms and Conditions

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

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) does not apply to the NO_x, CO, SO₂, particulate emissions and VOC from this air contaminant source since the uncontrolled potential to emit for NO_x, CO, SO₂, particulate emissions and VOC is less than 10 tons/yr.



c) Operational Restrictions

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

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

f) Testing Requirements

- (1) Compliance with the emissions limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitations:

NO_x emissions shall not exceed 0.03 lb/mmBTU and 2.98 tons per year.

Applicable Compliance Method:

The lb/mmBTU emissions limitation was based upon an emission factor of 0.03 lb/mmBTU, where 0.03 lb/mm BTU = 66 lb/mmscf (per manufacturer's guarantee via permittee's application) / 1,100 BTU/scf (natural gas heating value).

If required, NO_x emissions shall be determined according to test Methods 1 - 4, and 7 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:



$$\begin{aligned}
\text{NO}_x \text{ (tons/yr)} &= \text{NO}_x \text{ emission factor (lb/mm BTU)} \times \text{the maximum heat input rating of the combustion unit} \times 8,760 \text{ hours of operation per year} \times 1 \text{ ton}/2,000 \text{ lbs} \\
&= 0.03 \text{ lb/mm BTU} \times 22.65 \text{ mm BTU/hr} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\
&= 2.98 \text{ tons per year}
\end{aligned}$$

b. Emissions Limitations:

CO emissions shall not exceed 0.06 lb/mm BTU and 5.95 tons per year.

Applicable Compliance Method:

The lb/mmBTU emissions limitation was based upon an emission factor of 0.06 lb/mmBTU , where 0.06 lb/mm BTU = 66 lb/mmscf (per manufacturer's guarantee via permittee's application) / 1100 BTU/scf (natural gas heating value).

If required, CO emissions shall be determined according to test Methods 1 - 4, and 10 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned}
\text{CO (tons/yr)} &= \text{CO emission factor (lb/mmBTU)} \times \text{the maximum heat input rating of the combustion unit} \times 8,760 \text{ hours of operation per year} \times 1 \text{ ton}/2,000 \text{ lbs} \\
&= 0.06 \text{ lb/mm BTU} \times 22.65 \text{ mm BTU/hr} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\
&= 5.95 \text{ tons per year}
\end{aligned}$$

c. Emissions Limitations:

SO₂ emissions shall not exceed 0.00059 lb/mm BTU and 0.06 ton per year.

Applicable Compliance Method:

The lb/mmBTU emissions limitation was based upon the emission factor of 0.6 lb/mmscf (AP42, Table 1.4-2, Emission Factors for Criteria Pollutants and Greenhouse Gases, 7/98)X 1.07¹divided by 1,100 BTU/scf.

If required, SO₂ emissions shall be determined according to test Methods 1 - 4, and 6 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.



Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned}
\text{SO}_2 \text{ (ton/yr)} &= \text{SO}_2 \text{ emission factor (lb/million BTU) X the maximum heat input rating of the combustion unit X 8,760 hours of operation per year X 1 ton/2,000 lbs} \\
&= 0.00059 \text{ lb/million BTU X 22.65 million BTU/hr X 8,760 hrs/yr X 1 ton/2,000 lbs} \\
&= 0.06 \text{ ton per year}
\end{aligned}$$

d. Emissions Limitations:

PE shall not exceed 0.00745 lb/mm BTU and 0.74 ton per year.
PE shall not exceed 0.020 lb/mmBTU.

Applicable Compliance Method:

The lb/mmBTU emissions limitation was based upon an emission factor of 7.6 lb/mmscf (emission factor for PE, AP 42, table 1.4.2 (7/98)) X 1.07¹ divided by 1,100 BTU/scf (heating value of the natural gas).

If required, PE shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources", and the procedures specified in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned}
\text{PE (ton/yr)} &= \text{PE emission factor (lb/mm BTU) X the maximum heat input rating of the combustion unit X 8,760 hours of operation per year X 1 ton/2,000 lbs} \\
&= 0.00745 \text{ lb/mm BTU X 22.65 mmBTU/hr X 8,760 hrs/yr X 1 ton/2,000 lbs} \\
&= 0.74 \text{ ton per year}
\end{aligned}$$

e. Emissions Limitations:

VOC emissions shall not exceed 0.0054 lb/mmBTU and 0.53 ton per year.

Applicable Compliance Method:

The lb/mmBTU emissions limitation was based upon an emission factor of 5.5 lb/mmscf (emission factor for VOC, AP 42, table 1.4.2 (7/98)) X 1.07¹ divided by 1100 BTU/scf (heating value of the natural gas).

If required, VOC emissions shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative



U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned} \text{VOC (ton/yr)} &= \text{VOC emission factor (lb/mmBTU)} \times \text{the maximum heat} \\ &\quad \text{input rating of the combustion unit} \times 8,760 \text{ hours of} \\ &\quad \text{operation per year} \times 1 \text{ ton}/2,000 \text{ lbs} \\ &= 0.0054 \text{ lb/mm BTU} \times 22.65 \text{ mm BTU/hr} \times 8,760 \text{ hrs/yr} \times 1 \\ &\quad \text{ton}/2,000 \text{ lbs} \\ &= 0.53 \text{ ton per year} \end{aligned}$$

f. Emissions Limitation:

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

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 9.

¹1.07 = 1,100/1,020, which is the emission factor adjustment allowed by footnote "a" in AP 42, Table 1.4.2, Emission factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion. 1,100 Btu/scf was submitted by the permittee as the specified heating value of the natural gas used in this heating unit.

g) Miscellaneous Requirements

(1) None.



2. P003, Emergency Flare

Operations, Property and/or Equipment Description:

1.01 mmBTU/hr Emergency Flare - Air-assisted flare that will be used to control emergency process releases. The flare will be equipped with natural gas pilot burners, and a small amount of natural gas will be used to purge the flare header to avoid flash back and resulting over-pressurization.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	<p>Nitrogen oxide (NO_x) emissions shall not exceed 0.09804 lb/mmBTU and 0.4337 ton per year.</p> <p>Carbon Monoxide (CO) emissions shall not exceed 0.08235 lb/mmBTU and 0.3643 ton per year.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.0005882 lb/mmBTU and 0.002602 ton per year.</p> <p>Particulate emissions (PE) shall not exceed 0.005588 lb/mmBtu and 0.02472 ton per year.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Volatile organic compound (VOC) emissions shall not exceed 0.005392 lb/mmBTU and 0.02385 ton per year. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b. below.

(2) Additional Terms and Conditions

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, CO, SO₂, VOC and PE from this air contaminant source since the uncontrolled potential to emit for NO_x, CO, SO₂, VOC and PE is less than 10 tons/yr.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) None.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-



Business Center: Air Services” although PERs can be submitted via U.S. postal service or can be hand delivered.

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:

NO_x emissions shall not exceed 0.09804 lb/mmBTU and 0.4337 ton per year.

Applicable Compliance Method:

The lb/mmBTU emissions limitation was based upon the emission factor of 100 lb/mmscf (emission factor for NO_x, AP 42, Emission Factors for Nitrogen Oxides (NO_x) and Carbon Monoxide (CO) from Natural Gas Combustion, Table 1.4-1,(7/98)) X 1.07¹divided by 1,100 BTU/scf.

If required, NO_x emissions shall be determined according to test Methods 1 - 4, and 7 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned}
 \text{NO}_x \text{ (ton/yr)} &= \text{NO}_x \text{ emission factor (lb/mm BTU) X the maximum heat} \\
 &\quad \text{input rating of the combustion unit (submitted in} \\
 &\quad \text{application) X 8,760 hours of operation per year X 1} \\
 &\quad \text{ton/2,000 lbs} \\
 &= 0.09804 \text{ lb/mm BTU X 1.01 mm BTU/hr X 8,760 hrs/yr X 1} \\
 &\quad \text{ton/2,000 lbs} \\
 &= 0.4337 \text{ ton per year}
 \end{aligned}$$

b. Emissions Limitations:

CO emissions shall not exceed 0.08235 lb/mmBTU and 0.3643 ton per year.

Applicable Compliance Method:

The lb/mmBTU emission limitation was based upon the emission factor of 84 lb/mmscf (emission factor for CO, AP 42, Emission Factors for Nitrogen Oxides (NO_x) and Carbon Monoxide (CO) from Natural Gas Combustion, Table 1.4-1) X 1.07¹divided by 1,100 BTU/scf.



If required, CO emissions shall be determined according to test Methods 1 - 4, and 10 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned}
\text{CO (tons/yr)} &= \text{CO emission factor (lb/mmBTU)} \times \text{the maximum heat input rating of the combustion unit (submitted in application)} \times 8,760 \text{ hours of operation per year} \times 1 \text{ ton}/2,000 \text{ lbs} \\
&= 0.08235 \text{ lb/mm BTU} \times 1.01 \text{ mm BTU/hr} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\
&= 0.3643 \text{ ton per year}
\end{aligned}$$

c. Emissions Limitations:

SO₂ emissions shall not exceed 0.0005882 lb/mm BTU and 0.002602 ton per year.

Applicable Compliance Method:

The lb/mmBTU emissions limitation was based upon an emission factor of 0.6 lb/mmscf (emission factor for SO₂, AP 42, table 1.4.2 (7/98)) X 1.07² divided by 1,100 BTU/scf (heating value of the natural gas).

If required, SO₂ emissions shall be determined according to test Methods 1 - 4, and 6 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned}
\text{SO}_2 \text{ (ton/yr)} &= \text{SO}_2 \text{ emission factor (lb/mmBTU)} \times \text{the maximum heat input rating of the combustion unit} \times 8,760 \text{ hours of operation per year} \times 1 \text{ ton}/2,000 \text{ lbs} \\
&= 0.0005882 \text{ lb/mmBTU} \times 1.01 \text{ mmBTU/hr} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\
&= 0.002602 \text{ ton per year}
\end{aligned}$$

d. Emissions Limitations:

PE shall not exceed 0.005588 lb/mm BTU of actual heat input and 0.02472 ton per year.



Applicable Compliance Method:

The lb/mmBTU emissions limitation was based upon an emission factor of 5.7 lb/mmscf (emission factor for PE, AP 42, table 1.4.2 (7/98)) X 1.07² divided by 1,100 BTU/scf (heating value of the natural gas).

If required, PE shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources", and the procedures specified in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned}
\text{PE (ton/yr)} &= \text{PE emission factor (lb/mm BTU)} \times \text{the maximum heat input rating of the combustion unit} \times 8,760 \text{ hours of operation per year} \times 1 \text{ ton}/2,000 \text{ lbs} \\
&= 0.005588 \text{ lb/mm BTU} \times 1.01 \text{ mmBTU/hr} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\
&= 0.02472 \text{ ton per year}
\end{aligned}$$

e. Emissions Limitations:

VOC emissions shall not exceed 0.005392 lb/mmBTU and 0.02385 ton per year.

Applicable Compliance Method:

The lb/mmBTU emissions limitation was based upon an emission factor of 0.6 lb/mmscf (emission factor for SO₂, AP 42, table 1.4.2 (7/98)) X 1.07² divided by 1,100 BTU/scf (heating value of the natural gas).

If required, VOC emissions shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned}
\text{VOC (ton/yr)} &= \text{VOC emission factor (lb/mm BTU)} \times \text{the maximum heat input rating of the combustion unit} \times 8,760 \text{ hours of operation per year} \times 1 \text{ ton}/2,000 \text{ lbs} \\
&= 0.005392 \text{ lb/mm BTU} \times 1.01 \text{ mm BTU/hr} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\
&= 0.02385 \text{ ton per year}
\end{aligned}$$

¹ 1.07 = 1,100/1,020, which is the emission factor adjustment allowed by footnote "a" in AP 42, Table 1.4.1, Emission factors for Nitrogen Oxides (NO_x) and Carbon Monoxide (CO) from Natural



Gas Combustion. 1,100 Btu/scf was submitted by the permittee as the specified heating value of the natural gas used in this heating unit.

² $1.07 = 1,100/1,020$, which is the emission factor adjustment allowed by footnote "a" in AP 42, Table 1.4.2, Emission factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion. 1,100 Btu/scf was submitted by the permittee as the specified heating value of the natural gas used in this heating unit.

g) Miscellaneous Requirements

- (1) None.



3. P004, Equipment Blowdowns

Operations, Property and/or Equipment Description:

Equipment Maintenance Blowdown emissions where it is not feasible to vent to a flare for control; based on a maximum of 0.81 ton per year.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Fugitive volatile organic compound (VOC) emissions shall not exceed 0.81 ton per rolling, 12-month period. See b)(2)a. and c)(1) below.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b. below.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant emissions less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation



Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revision to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limits/control measures no longer apply.

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) does not apply to the VOC emissions from this air contaminant source since the uncontrolled potential to emit for VOC emissions is less than 10 tons/yr.

- c) **Operational Restrictions**

- (1) The permittee shall minimize the frequency and size of blowdown events by conducting routine operation and maintenance activities in a manner consistent with safety and good air pollution control practices.

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

- (1) The permittee shall maintain the following records on a monthly basis:
 - a. The date and number of each maintenance blowdown event;
 - b. Total volume of gas emitted from each maintenance blowdown event; and
 - c. Total volume of gas emitted from all maintenance blowdown events as a rolling, 12-month total.
 - d. Total VOC emissions emitted as a rolling, 12-month total.

- e) **Reporting Requirements**

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

- f) **Testing Requirements**

- (1) Compliance with the emissions limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:



a. Emissions Limitation:

Fugitive VOC emissions shall not exceed 0.81 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the VOC emissions limitation shall be based upon the following calculation using the inputs provided in the permittee's application and the recordkeeping requirements in d)(1):

$$\text{VOC} = \text{percentage of VOC per blowdown event} \times \text{annual blowdown mass in lb/yr} \times 1 \text{ ton} / 2,000 \text{ lb}$$

$$\text{VOC} = 18.52 \% \times 8,753 \text{ lb/yr} \times 1 \text{ ton} / 2,000 \text{ lb}$$

$$\text{VOC} = 0.81 \text{ ton/yr}$$

Where:

Annual blowdown mass = 8,753 lb/yr (from application)

Percentage of VOC per blowdown event = $1,621.19 \text{ lb/yr} / 8,753 \text{ lb/yr} = 18.52\%$
(as submitted in application)

g) Miscellaneous Requirements

(1) None.



4. P801, Equipment Leaks

Operations, Property and/or Equipment Description:

Equipment Leaks - Various equipment components, including valves, pumps, flanges, and connectors will be located throughout the plant that will result in fugitive emission due to equipment leaks.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Volatile organic compound (VOC) emissions shall not exceed 12.20 tons per rolling, 12-month period.
b.	40 CFR Part 60, Subparts OOOO and VV (40 CFR 60.5360–60.5430, 40 CFR 60.482-2a, 60.482-4a–60.482-11a) [In accordance with 40 CFR 60.5365 (f)(2), this emissions unit includes fugitive leaks from equipment associated with a compressor station and a field gas gathering system in an onshore natural gas processing plant constructed after August 23, 2011.]	See b)(2)a.-c . and c)(1) below.



(2) Additional Terms and Conditions

- a. In accordance with 40 CFR Part 60 Subparts OOOO and VV, the following pieces of equipment are affected facilities in a process unit in an onshore natural gas processing plant constructed after August 23, 2011. Fugitive leaks from the following equipment are covered by this permit and subject to the NSPS requirements: valves, pump seals, connectors, flanges, open-ended lines, compressors and pressure relief devices.
- b. No later than 180 days after initial startup, the permittee shall demonstrate compliance with the applicable requirements of 40 CFR 60.482-1(a), (b) and (d) and 60.482-2 through 60.482-10, except as provided in 40 CFR 60.633.
- c. Compliance with 40 CFR 60.482-1 to 60.482-10 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 60.485.

c) Operational Restrictions

- (1) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subparts OOOO and VV, including the following sections:

60.5400(a) and 60.482-2(b)(2)(ii)	Designate visual indications of liquids dripping from a pump seal as a leak, and repair the leak within 15 days of detection by eliminating visual indications of liquids dripping.
60.5400(a), 60.482-2(c)(1) and 60.5401(a)(3)(ii)	Repair detected leaks from pumps in light liquid service not later than 15 calendar days after detection, except as provided in 60.482-9a.
60.5400(a) and 60.482-2(c)(2)	Attempt first repair of detected leaks from pumps in light liquid service within 5 days after each leak is detected.
60.5400(a) and 60.482-2(d)	Meet the requirements of 60.482-2(d) for pumps equipped with a dual mechanical seal system.
60.5400(a), 60.482-2(e) and 60.486(e)	Meet the requirements of 60.482-2(e) for pumps designated for no detectable emissions (less than 500 ppm above background) in lieu of 60.482-2(a), (c) and (d).
60.5400(a), 60.482-2(g) 1) and 60.486(f)	Meet the requirements of 60.482-2(g) for



Final Permit-to-Install and Operate

Seneca Gas Plant

Permit Number: P0113977

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Effective Date: 9/26/2013

	pumps designated as unsafe to monitor in lieu of 60.482-2(a) and (d)(4) – (6).
60.5400(a) and 60.482-3(a)	Equip each compressor with a seal system that includes a barrier fluid system that prevents leakage of VOC to the atmosphere, except as provided in 60.482-1(c) and 60.482-3(h), (i), and (j).
60.5400(a) and 60.482-3(b) through (g)	Operate each compressor seal system and barrier fluid system in accordance with 40.482-3(b) through (g).
60.5400(a), 60.482-3(i) and 60.486(e)	Meet the requirements of 60.482-3(i) for compressors designated for no detectable emissions (less than 500 ppm above background) in lieu of 60.482-3(a) through (h).
60.5400(a), 60.482-4 and 60.5401(b)(3)	Repair detected leaks from pressure relief devices in gas/vapor service as soon as practicable, but not later than 15 calendar days after detection, except as provided in 60.482-9a, and attempt first repair within 5 days after each leak is detected.*
60.5400(a) and 60.482-4(d)	Meet the requirements of 60.482-4(d)(2) for any pressure relief device equipped with a rupture disk upstream of the pressure relief device in lieu of 60.482-4(a) and (b).
60.5400(a), 60.482-5 and 60.5401(c)	Sampling connection systems are exempt from the requirements of 60.482-5.
60.5400(a) and 60.482-6(a)(1)	Equip each open-ended valve or line with a cap, blind flange, plug or a second valve, except as provided in 60.482-1(c),(d) and (e).
60.5400(a), 60.482-6(a)(2) and (b) through (e)	Operate each open-ended valve or line in compliance with the requirements of 60.482-5(a)(2) and (b) through (e).
60.5400(a), 60.482-7(d)(1) and (2)	Repair detected leaks from valves in gas/vapor or light liquid service as soon as practicable, but not later than 15 calendar days after detection, except as provided in 60.482-9, and attempt first repair within 5



	days after each leak is detected.
60.5400(a) and 60.482-7(e)	Use best practices in the first attempt at repair of leaks from valves in gas/vapor or light liquid service.
60.5400(a) and 60.482-7(f)	Meet the requirements of 60.482-7(f) for valves in gas/vapor or light liquid service designated for no detectable emissions (less than 500 ppm above background) in lieu of 60.482-7(a).
60.5400(a) and 60.482-7(h)	Meet the requirements of 60.482-7(h) for valves in gas/vapor or light liquid service designated as difficult to monitor in lieu of 60.482-7(a).
60.5400(a) and 60.482-8(c)	Repair detected leaks from pumps and valves in heavy liquid service, pressure relief devices in light or heavy liquid service, and connectors as soon as practicable, but not later than 15 calendar days after detection, except as provided in 60.482-9, and attempt first repair within 5 days after each leak is detected.
60.5400(a) and 60.482-8(d)	Use best practices in the first attempt at repair of leaks from pumps and valves in heavy liquid service, pressure relief devices in light or heavy liquid service, and connectors.
60.5400(a) and 60.482-9	Comply with the requirements in 60.482-9 for delays of repair.

* The permittee may choose to comply with any alternative standards provided in 40 CFR Part 60, Subparts KKK and VV.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subparts OOOO and VV, including the following sections:

60.5400(a), 60.482-2(a)(1) and 60.485(b)	Monitor each pump in light liquid service within 30 days after the end of the startup period and monthly thereafter to detect leaks, except as provided in 60.482-1(f) and 60.482-2(d), (e) and (f).
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60.5400(a) and 60.482-2(a)(2)	Visually inspect each pump in light liquid service each week for indications of liquids dripping from the pump seal, except as provided in 60.482-1(f).
60.5400(a) and (d), 60.482-2(b)(1) and 60.485(b)(1)	Detect leaks from pumps in light liquid service at an instrument rating of 500 ppm.
60.5400(a) and 60.482-2(b)(2)(i)	Monitor each pump in light liquid service in accordance with 60.485(b) within 5 days of discovery of liquids dripping from the pump seal.*
60.5400(a) and 60.482-2(h)	Alternate inspection requirements for pumps located at unmanned plant sites.
60.5400(a), 60.482-4 and 60.5401(b)(1)	Monitor each pressure relief device in gas/vapor service quarterly and within 5 days after each pressure release to detect leaks in accordance with 60.485(c).*
60.5400(a) and (d), 60.5401(b)(2), 60.482-4 and 60.485(c)	Detect leaks from pressure relief devices in gas/vapor service at an instrument rating of 500 ppm.*
60.5400(a) and 60.482-7(a)	Monitor each valve in gas/vapor and light liquid service within 30 days after the end of the startup period and monthly thereafter to detect leaks, except as provided in 60.482-1(c) and (f), 60.483-1 and 60.483-2 and 60.482-7(f), (g) and (h).*
60.5400(a), 60.5421	Perform recordkeeping requirements with respect to VOC requirements

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.



- (2) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subparts OOOO and VV, including the following sections:

60.7(a)	Initial notification of the date construction of the affected facility commenced and the actual date of initial startup of the affected facility
60.5400(e), and 60.487(a)	Submit semiannual reports beginning six months after the initial startup date
60.5400(e), and 60.487(b) and (c)	Initial and subsequent semiannual report requirements
60.5400(a), 60.5420	Report as required by 60.5420
60.5400(a),60.5422	Perform reporting with respect to VOC requirements

f) Testing Requirements

- (1) Compliance with the emissions limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

VOC emissions shall not exceed 12.20 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emissions limitation shall be demonstrated by the following calculation based on the emissions factors (lb/hr/source) in service, and the recordkeeping in d)(1):

VOC =[# of connectors in gas service X gas service connectors EF

+# of valves in gas service X gas service valve EF

+# of flanges in gas service X gas service flanges EF

+# of low-bleed pneumatic valves in gas service X gas service low-bleed pneumatic valves EF

+# of other points in gas service X other points in gas service EF

+# of connectors in light liquid service X light liquid service connectors EF

+# of valves in light liquid service X light liquid service valve EF



+# of flanges in light liquid service X light liquid service flanges EF

+# of low-bleed pneumatic valves in light liquid service X light liquid service low-bleed pneumatic valves EF

+# of pump seals in light liquid service X light liquid service pump seal EF

+# of other points in light liquid service X other points in light liquid service EF]

X safety factor X percentage of gas and light liquid that is VOC X 8,760 hrs/yr X 1 ton / 2,000 lb/ton

Where emission factors are:

4.41E-04 lb/hr for connectors in gas service

9.92E-03 lb/hr for valves in gas service

8.60E-04 lb/hr for flanges in gas service

9.92E-03 lb/hr for low-bleed pneumatic valves in gas service

1.94E-02 lb/hr for other points in gas service

4.63E-04 lb/hr for connectors in light liquid service

5.51E-03 lb/hr for valves in light liquid service

2.43E-04 lb/hr for flanges in light liquid service

5.51E-03 lb/hr for low-bleed pneumatic valves in light liquid service

2.87E-02 lb/hr for pump seals in light liquid service

1.65E-02 lb/hr for other points in light liquid service

And

15% = safety factor

18.52% = percentage of gas and light liquid that is VOC, provided by permittee in application

g) Miscellaneous Requirements

(1) None.



5. Emissions Unit Group -Hot Oil Heaters: B004,B005

EU ID	Operations, Property and/or Equipment Description
B004	Hot Oil Heater #1 - Natural gas-fired process heater rated at a heat input capacity of 30 MMBtu/hr that will maintain the temperature of a hot oil system used to provide heat to various portions of the plant.
B005	Hot Oil Heater #2 - Natural gas-fired process heater rated at a heat input capacity of 30 MMBtu/hr that will maintain the temperature of a hot oil system used to provide heat to various portions of the plant.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Nitrogen oxides (NO _x) emissions shall not exceed 0.04 lb/mmBTU and 5.26 tons per year. Carbon monoxide (CO) emissions shall not exceed 0.04 lb/mmBTU and 5.26 tons per year. Sulfur dioxide (SO ₂) emissions shall not exceed 0.00059 lb/mmBTU and 0.077 ton per year. Particulate emissions (PE) shall not exceed 0.0186 lb/mmBTU and 2.44 tons



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>per year.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 0.019 lb/mmBTU and 2.50 tons per year.</p> <p>The requirements of this rule include compliance with OAC rules 3745-17-07(A).</p> <p>See b)(2)a. below.</p>
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b. below.
c.	OAC rule 3745-17-07(A)	Visible PE from any stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-10(B)(1)	<p>PE shall not exceed 0.020 lb/mmBTU, actual heat input.</p> <p>This emission limitation is less stringent than the limitation listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.</p>

(2) Additional Terms and Conditions

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



The Best Available Technology (BAT) requirements under OAC rule 3745-31-058(A)(3) do not apply to the NO_x, CO, SO₂, VOC, and PE emission from this air contaminant source since the uncontrolled potential to emit for NO_x, CO, SO₂, VOC, and PE is less than 10 tons/yr.

c) Operational Restrictions

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

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

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:

NO_x emissions shall not exceed 0.04 lb/mm BTU and 5.26 tons per year.

Applicable Compliance Method:

The lb/mmBTU emissions limitation was based upon the following calculation:

$EF_{NOX} / \text{heating value of Seneca site natural gas}$

$= 44 \text{ lb/mmcf} / 1,100 \text{ BTU/cf}$

$= 0.04 \text{ lb/mmBTU}$

Compliance with the annual emissions limitation shall be based on the following calculation:



$$\begin{aligned} & (\text{Input capacity /minimum heat content}) \times \text{EF} \times 8,760 \text{ hr/yr} \times 1 \text{ ton/ } 2,000 \text{ lb} \\ & = (30 \text{ mmBTU/hr} / 1,100 \text{ BTU/cf}) \times 44 \text{ lb/mmcf} \times 8,760 \text{ hr/yr} \times 1 \text{ ton/ } 2,000 \text{ lb} \\ & = 5.26 \text{ tons/yr} \end{aligned}$$

Where

30 mmBTU/hr = Input capacity of heater*

1,100 BTU/cf = heating value of Seneca site natural gas*

44 lb/mmcf = NO_x emission factor (EF_{NO_x}) of Seneca site natural gas*

*as submitted in permittee's application

If required, NO_x emissions shall be determined according to test Methods 1 - 4, and 7 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

b. Emissions Limitation:

CO emissions shall not exceed 0.04 lb/mm BTU and 5.26 tons per year.

Applicable Compliance Method:

The lb/mmBTU emissions limitation was based upon the following calculation:

EF_{CO} / heating value of Seneca site natural gas

$$= 44 \text{ lb/mmcf} / 1,100 \text{ BTU/cf}$$

$$= 0.04 \text{ lb/mmBTU}$$

Compliance with the 5.26 tons/yr shall be based on the following calculation:

$$\begin{aligned} & (\text{Input capacity /minimum heat content}) \times \text{EF}_{\text{CO}} \times 8,760 \text{ hr/yr} \times 1 \text{ ton/ } 2,000 \text{ lb} \\ & = (30 \text{ mmBTU/hr} / 1,100 \text{ BTU/cf}) \times 44 \text{ lb/mmcf} \times 8,760 \text{ hr/yr} \times 1 \text{ ton/ } 2,000 \text{ lb} \\ & = 5.26 \text{ tons/yr} \end{aligned}$$

Where

30 mmBTU/hr = Input capacity of heater*



1,100 BTU/cf = heating value of Seneca site natural gas*

44 lb/mmcf = emission factor (EF_{CO}) of Seneca site natural gas*

*as submitted in permittee's application

If required, CO emissions shall be determined according to test Methods 1 - 4, and 10 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

c. Emissions Limitations:

SO₂ emissions shall not exceed 0.00059 lb/mmBTU and 0.077 ton per year.

Applicable Compliance Method:

The lb/mmBTU emissions limitation was based upon the following calculation:

EF_{SO₂} / heating value of Seneca site natural gas

$$= 0.65 \text{ lb/mmcf} / 1,100 \text{ BTU/cf}$$

$$= 0.000591 \text{ lb/mmBTU}$$

Compliance with the 0.09 ton/yr shall be based on the following calculation:

(Input capacity / minimum heat content) X EF_{SO₂} X 8,760 hr/yr X 1 ton/ 2,000 lb

$$= (30 \text{ mmBTU/hr} / 1,100 \text{ BTU/cf}) \times 0.65 \text{ lb/mmcf} \times 8,760 \text{ hr/yr} \times 1 \text{ ton} / 2,000 \text{ lb}$$

$$= 0.077 \text{ tons/yr}$$

Where

30 mmBTU/hr* = Input capacity of heater

1,100 BTU/cf *= heating value of Seneca site natural gas

0.65 lb/mmcf *= emission factor (EF_{SO₂}) of Seneca site natural gas. 0.65 was adjusted by a factor of 1.0784, which is the ratio of the Seneca natural gas heating value to the average natural gas heating value, or $\frac{1,100 \text{ BTU/cf}}{1,020 \text{ BTU/cf}}$, which is an



adjustment allowed per AP42, table 1.4-2, footnote "a."

*as submitted in permittee's application

If required, SO₂ emissions shall be determined according to test Methods 1 - 4, and 6 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

d. Emissions Limitations:

PE shall not exceed 0.0186 lb/million BTU and 2.44 tons per year.
 PE shall not exceed 0.20 lb/mmBTU, actual heat input.

Applicable Compliance Method:

The lb/mmBTU was based upon the following calculation:

$$EF_{PE} / \text{heating value of Seneca site natural gas}$$

$$= 20.45 \text{ lb/mmcf} / 1,100 \text{ BTU/cf}$$

$$= 0.0186 \text{ lb/mmBTU}$$

Compliance with the 2.44 tons/yr limit shall be based on the following calculation:

$$(\text{Input capacity} / \text{minimum heat content}) \times EF_{PE} \times 8,760 \text{ hr/yr} \times 1 \text{ ton} / 2,000 \text{ lb}$$

$$= (30 \text{ mmBTU/hr} / 1,100 \text{ BTU/cf}) \times 20.45 \text{ lb/mmcf} \times 8,760 \text{ hr/yr} \times 1 \text{ ton} / 2,000 \text{ lb}$$

$$= 2.44 \text{ tons/yr}$$

Where

30 mmBTU/hr* = Input capacity of heater

1,100 BTU/cf *= heating value of Seneca site natural gas

20.45 lb/mmcf *= emission factor (EF_{PE}) of Seneca site natural gas. 20.45 was adjusted by a factor of 1.0784, which is the ratio of the Seneca natural gas heating value to the average natural gas heating value, or $\frac{1,100 \text{ BTU/cf}}{1,020 \text{ BTU/cf}}$, which is an



adjustment allowed per AP42, table 1.4-2, footnote "a."

*as submitted in permittee's application

If required, PE shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources", and the procedures specified in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

e. Emissions Limitations:

VOC emissions shall not exceed 0.019 lb/million BTU and 2.50 tons per year.

Applicable Compliance Method:

The lb/mmBTU was based upon the following calculation:

$EF_{VOC} / \text{heating value of Seneca site natural gas}$

$= 20.90 \text{ lb/mmcf} / 1,100 \text{ BTU/cf}$

$= 0.019 \text{ lb/mmBTU}$

Compliance with the 2.50 tons/yr shall be based on the following calculation:

$(\text{Input capacity} / \text{minimum heat content}) \times EF \times 8,760 \text{ hr/yr} \times 1 \text{ ton} / 2,000 \text{ lb}$

$= (30 \text{ mmBTU/hr} / 1,100 \text{ BTU/cf}) \times 20.90 \text{ lb/mmcf} \times 8,760 \text{ hr/yr} \times 1 \text{ ton} / 2,000 \text{ lb}$

$= 2.50 \text{ tons/yr}$

Where

$30 \text{ mmBTU/hr} = \text{Input capacity of heater}^*$

$1,100 \text{ BTU/cf} = \text{heating value of Seneca site natural gas}^*$

$20.90 \text{ lb/mmcf} = \text{VOC emission factor } (EF_{VOC}) \text{ of Seneca site natural gas}^*$

*as submitted in permittee's application

If required, VOC emissions shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.



Final Permit-to-Install and Operate

Seneca Gas Plant

Permit Number: P0113977

Facility ID: 0661005008

Effective Date: 9/26/2013

f. Emissions Limitation:

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

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 9.

g) Miscellaneous Requirements

(1) None.



6. Emissions Unit Group -NG Engines: P001,P002,

EU ID	Operations, Property and/or Equipment Description
P001	Compressor Engine #1 –Stationary natural gas-fired four-stroke lean burn (4SLB) internal combustion engine rated at an operating capacity of 4,735 horsepower (hp) and equipped with an oxidation catalyst to control CO and VOC emissions, manufactured after July 1, 2010.
P002	Compressor Engine #2 –Stationary natural gas-fired four-stroke lean burn (4SLB) internal combustion engine rated at an operating capacity of 4,735 horsepower (hp) and equipped with an oxidation catalyst to control CO and VOC emissions, manufactured after July 1, 2010.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Nitrogen oxides (NO _x) emissions shall not exceed 0.5 g/hp-hr.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	CO emissions shall not exceed 0.14 g/hp-hr and 6.40 tons/year. VOC emissions shall not exceed 0.16 and 7.32 tons/year. Particulate emissions (PE) emissions from the stack serving this emissions



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>unit shall not exceed 0.00099 lb/MMBtu and 1.37 ton/ year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A).</p> <p>See b)(2)a. below.</p>
c.	OAC rule 3745-31-05(c), as effective 12/01/06	See b)(2)b. below.
d.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)c. below.
e.	OAC rule 3745-17-07(A)	Visible PE from any stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
f.	OAC rule 3745-17-11(B)(5)(b)	<p>PE shall not exceed 0.062 lb/mmBTU actual heat input.</p> <p>This emission limitation is less stringent than the limitations listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.</p>
g.	<p>40 CFR Part 60, Subpart JJJJ (40 CFR 60. 4230 – 60.4248)</p> <p>[In accordance with 40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1, this emissions unit is a 4,735 hp, natural gas-fired, stationary spark internal combustion engine manufactured after July 1, 2010 that is located at a new natural gas compressor station and is subject to the emission limitations and control measures specified in this section.]</p>	<p>NO_x emissions shall not exceed 1.0 g/hp-hr or 82 ppmvd at 15% oxygen (O₂).</p> <p>CO emissions shall not exceed 2.0 g/hp-hr or 270 ppmvd at 15% O₂.</p> <p>VOC emissions shall not exceed 0.7 g/hp-hr or 60 ppmvd at 15% O₂.</p> <p>[40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1]</p>



(2) Additional Terms and Conditions

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

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

Permit to Install and Operate P0113977 for this air contaminant source takes into account the following voluntary restriction (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

- i. The use of the catalyst for CO and VOC with a minimum of 75% control.
- ii. CO emissions limitation of 6.40 TPY.
- iii. VOC emissions limitation of 7.32 TPY.

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC and particulate emissions from this air contaminant source since the uncontrolled potential to emit for VOC and particulate is less than 10 tons/yr.

c) Operational Restrictions

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

60.4234	Over the life of the engine, operate and maintain engine to the emission standards as required in 60.4233.
60.4243(b) and 60.4243(b)(2)	For a non-certified engine, demonstrate compliance with emission standards specified in 60.4233(e) according to



	60.4243(ii).
60.4243(b)(2)(ii)	Maintain and operate the engine consistent with good air pollution control practice for minimizing emissions.
60.4243(g)	Air-to-fuel (AFR) controllers shall be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated properly.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall comply with the applicable monitoring and/or recordkeeping requirements required under 40 CFR Part 60, Subpart JJJJ, including the following sections:

60.4243(b)(2)(ii) and 60.4245(a)(2)(iii)	Keep a maintenance plan and records of maintenance conducted on the engine.
60.4245(a)(1)	Maintain records of notifications and all supporting documentation.
60.4245(a)(4)	Maintain documentation that the engine is certified to meet the emissions standards and information as required in 40 CFR Parts 90, 1048, 1054 and 1060, as applicable, or, if the SI ICE is not certified or is operated in a non-certified manner, documentation that the engine meets the emissions standards.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.



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

60.4245(c)	Submit an initial notification of date of construction per 60.7(a)(1) and include information per 60.4545(c)
60.4245(d)	Submit a copy of each performance test within 60 days after completion of test.

f) Testing Requirements

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

60.4243(b)(2)(ii) and 60.4244(a)-(g)	Conduct an initial performance test and subsequent performance tests every 8760 hrs. or every 3 years, whichever comes first.
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- (2) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

NO_x emissions shall not exceed 1.0 g/hp-hr or 82 ppmvd at 15% oxygen (O₂).
 CO emissions shall not exceed 2.0 g/hp-hr or 270 ppmvd at 15% O₂.
 VOC emissions shall not exceed 0.7 g/hp-hr or 60 ppmvd at 15% O₂.

Applicable Compliance Method:

Compliance with the short-term emissions limitations shall be demonstrated based upon the testing requirements specified in f)(2).

b. Emissions Limitation:

NO_x emissions shall not exceed 1.0 g/hp-hr.

Applicable Compliance Method:

The short-term emissions limitation was based on the provided manufacturer emission factor of 1.0 g/hp-hr.



c. Emissions Limitations:

CO emissions shall not exceed 0.14 g/hp-hr and 6.40 tons/yr.

Applicable Compliance Method:

The short-term emissions limitation was based on the provided manufacturer emission factor of 0.14 g/hp-hr.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned} \text{CO} &= \text{CO short term limit} \times 1\text{lb}/453.6\text{g} \times \text{hp} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\ &= 0.14 \text{ g/hp-hr} \times 1 \text{ lb}/453.6 \text{ g} \times 4,735 \text{ hp} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\ &= 6.40 \text{ tons/yr} \end{aligned}$$

Where:

0.14 g/hp-hr = CO emissions level guaranteed by the engine manufacturer; and
4,735 hp = power rating of the engine (as submitted in permittee's application).

d. Emissions Limitations:

VOC emissions shall not exceed 0.16 g/hp-hr and 7.32 tons per year.

Applicable Compliance Method:

The short-term emissions limitation was based on the provided manufacturer's emission factor of 0.16 g/hp-hr.

VOC emissions shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned} \text{VOC} &= \text{VOC short term limit} \times 1\text{lb}/453.6\text{g} \times \text{hp} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\ &= 0.16 \text{ g/hp-hr} \times 1 \text{ lb}/453.6 \text{ g} \times 4,735 \text{ hp} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\ &= 7.32 \text{ tons/yr} \end{aligned}$$

Where:

0.16 g/hp-hr = VOC emissions level guaranteed by the engine manufacturer; and
4,735 hp = power rating of the engine (as submitted in permittee's application).



e. Emissions Limitations:

PE shall not exceed 0.00099 lb/MMBtu and 1.37 tons per year.

PE shall not exceed 0.062 lb/MMbtu, actual heat input.

Applicable Compliance Method:

The short-term emissions limitation was based on the provided manufacturer's emission factor of 0.00099 lb/MMbtu specified in AP-42 Table 3.2-2 (7/00).

If required, particulate emissions shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources", and the procedures specified in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned} \text{PE} &= \text{PE short term limit} \times \text{fuel input capacity} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\ &= 0.0099 \text{ lb/MMBtu} \times 31.2752 \text{ MMbtu/hr} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\ &= 1.37 \text{ tons/yr} \end{aligned}$$

Where:

0.0099 lb/MMBtu = PE emission factor from AP-42, Section 3.2, Table 3.2-2

31.2752 MMbtu/hr = fuel input capacity (as submitted in permittee's application)

f. Emissions Limitation:

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

Applicable Compliance Method:

If required, visible PE shall be determined according to USEPA Method 9.

- (3) If required, initial performance testing shall be conducted as required in 40 CFR 60.4243(b)(2) or 60.4243(a)(2)(ii) pursuant to 40 CFR 60.4244 and Subpart A of 40 CFR Part 60. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- (4) If required, initial performance testing shall be conducted as required in 40 CFR 60.4243(b)(2) or 60.4243(a)(2)(ii) pursuant to 40 CFR 60.4244 and Subpart A of 40 CFR Part 60. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:



- a. The emissions testing for this emissions unit shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, as applicable,
- b. The emission testing shall be conducted to demonstrate compliance with the NO_x, CO and VOC emission limitations specified in b)(1).
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for NO_x, Methods 1 through 4 and 7, 7A, 7C, 7D or 7E of 40 CFR Part 60, Appendix A;
for CO, Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A; and
for VOC, Methods 1 through 4 and 25 and/or 18 of 40 CFR Part 60, Appendix A.

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

- d. The test(s) for each pollutant shall be conducted while the emissions unit is operating at or near its maximum capacity, while burning each fuel and/or combination of fuels, unless otherwise specified or approved by the Ohio EPA, Southeast District Office.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office's refusal to accept the results of the emission test(s).
- f. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.

g) Miscellaneous Requirements

- (1) None.



7. Emissions Unit Group -Regeneration Heaters: B001,B002

EU ID	Operations, Property and/or Equipment Description
B001	Regeneration Heater #1 - Natural gas-fired process heater rated at a heat input capacity of 21.72 MMBtu/hr that will be used to regenerate the molecular sieve dehydration unit.
B002	Regeneration Heater #2 - Natural gas-fired process heater rated at a heat input capacity of 21.72 MMBtu/hr that will be used to regenerate the molecular sieve dehydration unit.

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

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

a. None.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Nitrogen oxides (NO _x) emissions shall not exceed 0.04 lb/MMbtu and 3.81 tons per year. Carbon monoxide (CO) emissions shall not exceed 0.04 lb/MMbtu and 3.81 tons per year. Sulfur dioxide (SO ₂) emissions shall not exceed 0.00591 lb/MMbtu and 0.06 ton per year. Particulate emissions (PE) shall not exceed 0.013 lb/MMbtu and 1.24 ton per year.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Volatile organic compound (VOC) emissions shall not exceed 0.019 lb/million BTU and 1.81 tons per year. The requirements of this rule include compliance with OAC rules 3745-17-07(A). See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b. below.
c.	OAC rule 3745-17-07(A)	Visible PE from any stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-10(B)(1)	PE shall not exceed 0.020 lb/mmBTU. This emission limitation is less stringent than the limitation listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.

(2) Additional Terms and Conditions

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, CO, SO₂, PE and VOC emissions from this air



contaminant source since the uncontrolled potential to emit for NO_x, CO, SO₂, PE and VOC is less than 10 tons/year.

c) Operational Restrictions

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

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

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:

NO_x emissions shall not exceed 0.04 lb/mm BTU and 3.81 tons per year.

Applicable Compliance Method:

The short-term emissions limitation was based on the provided manufacturer's emission factor of 0.04 lb/mmBTU.

If required, NO_x emissions shall be determined according to test Methods 1 - 4, and 7 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be based on the following calculation:



$$\begin{aligned} & \text{Input capacity} \times EF_{NOX} \times 8,760 \text{ hr/yr} \times 1 \text{ ton/ } 2,000 \text{ lb} \\ &= 20.14 \text{ mmBTU/hr} \times .043 \text{ mmBTU}^{**} \times 8,760 \text{ hr/yr} \times 1 \text{ ton/ } 2,000 \text{ lb} \\ &= 3.81 \text{ tons/yr} \end{aligned}$$

Where:

$$20.14 \text{ mmBTU/hr} = \text{Input capacity of heater}^*$$

0.043 mmBTU **= emission factor (EF_{NOX}) of Seneca site natural gas. 0.043 was adjusted by a factor of 1.0784, which is the ratio of the Seneca natural gas heating value to the average natural gas heating value, or $\frac{1,100 \text{ BTU/cf}}{1,020 \text{ BTU/cf}}$, which is an adjustment allowed per AP42, table 1.4-2, footnote "a."

$$1,100 \text{ BTU/cf} = \text{heating value of Seneca site natural gas}^*$$

*as submitted in permittee's application

b. Emissions Limitations:

CO emissions shall not exceed 0.04 lb/mmBTU and 3.81 tons per year.

Applicable Compliance Method:

The short-term emissions limitation was based on the provided manufacturer's emission factor of 0.04 lb/mmBTU.

If required, CO emissions shall be determined according to test Methods 1 - 4, and 10 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be based on the following calculation:

$$\begin{aligned} & \text{Input capacity} \times EF_{CO} \times 8,760 \text{ hr/yr} \times 1 \text{ ton/ } 2,000 \text{ lb} \\ &= 20.14 \text{ mmBTU/hr} \times .043 \text{ mmBTU}^{**} \times 8,760 \text{ hr/yr} \times 1 \text{ ton/ } 2,000 \text{ lb} \\ &= 3.81 \text{ tons/yr} \end{aligned}$$

Where:

$$20.14 \text{ mmBTU/hr} = \text{Input capacity of heater}^*$$



0.043 mmBTU **= emission factor (EF_{CO}) of Seneca site natural gas. 0.043 was adjusted (multiplied) by a factor of 1.0784, which is the ratio of the Seneca natural gas heating value to the average natural gas heating value, or $\frac{1,100 \text{ BTU/cf}}{1,020 \text{ BTU/cf}}$, which is an adjustment allowed per AP42, table 1.4-2, footnote "a."

1,100 BTU/cf = heating value of Seneca site natural gas*

*as submitted in permittee's application

c. Emissions Limitations:

SO₂ emissions shall not exceed 0.000591 lb/MMbtu and 0.06 ton per year.

Applicable Compliance Method:

The short term emissions limitation was based on the following calculation:

EF_{SO2} / heating value of Seneca site natural gas

= 0.65 lb/mmcf / 1,100 BTU/cf

= 0.000591 lb/mmBTU

If required, SO₂ emissions shall be determined according to test Methods 1 - 4, and 6 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the 0.06 ton/yr shall be based on the following calculation:

Input capacity X EF_{SO2} X 8,760 hr/yr X 1 ton/ 2,000 lb

= (0.0197mmcf/hr) X 0.70 lb/mmcf X 8,760 hr/yr X 1 ton/ 2,000 lb

= 0.06 ton/yr

Where

0.0197 mmBTU/hr* = Input capacity of heater

1,100 BTU/cf *= heating value of Seneca site natural gas

0.65lb/mmcf = unadjusted emission factor, per the AP-42, table 1.4-2

0.70 lb/mmcf *= emission factor (EF_{SO2}) of Seneca site natural gas. 0.70 was adjusted (multiplied) by a factor of 1.0784, which is the ratio of the Seneca natural gas heating value to the average natural gas heating value, or $\frac{1,100 \text{ BTU/cf}}{1,020 \text{ BTU/cf}}$



which is an adjustment allowed per AP42, table 1.4-2, footnote "a."

*as submitted in permittee's application

d. Emissions Limitations:

PE shall not exceed 0.013 lb/MMBtu and 1.24 tons/year.
 PE shall not exceed 0.020 lb/MMBtu, actual heat input.

Applicable Compliance Method:

The short-term emissions limitation was based on the provided manufacturer's emission factor of 0.013 lb/MMBtu.

If required, PE shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources", and the procedures specified in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the 1.24 tons/yr limit shall be based on the following calculation:

$$\begin{aligned} & \text{Input capacity} \times EF_{PE} \times 8,760 \text{ hr/yr} \times 1 \text{ ton} / 2,000 \text{ lb} \\ &= 20.14 \text{ MMBtu/hr} \times 0.013 \text{ lb/MMBtu}^* \times 8,760 \text{ hr/yr} \times 1 \text{ ton} / 2,000 \text{ lb} \\ &= 1.24 \text{ tons/yr} \end{aligned}$$

Where:

20.14 mmBTU/hr* = Input capacity of heater

0.014 lb/mmcf *= emission factor (EF_{PE}) of Seneca site natural gas. 0.014 was adjusted (multiplied) by a factor of 1.0784, which is the ratio of the Seneca natural gas heating value to the average natural gas heating value, or $\frac{1,100 \text{ BTU/cf}}{1,020 \text{ BTU/cf}}$, which is an adjustment allowed per AP42, table 1.4-2, footnote "a."

*as submitted in permittee's application

e. Emissions Limitations:

VOC emissions shall not exceed 0.019 lb/MMBtu and 1.81 tons/yr.

Applicable Compliance Method:

The short-term emissions limitation was based on the provided manufacturer's emission factor of 0.019 lb/mmBTU.



If required, VOC emissions shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation shall be based on the following calculation:

$$\begin{aligned} & \text{Input capacity} \times \text{EF}_{\text{VOC}} \times 8,760 \text{ hr/yr} \times 1 \text{ ton} / 2,000 \text{ lb} \\ &= 20.14 \text{ mmBTU/hr} \times 0.0205 \text{ lb/MMbtu} \times 8,760 \text{ hr/yr} \times 1 \text{ ton} / 2,000 \text{ lb} \\ &= 1.81 \text{ tons/yr} \end{aligned}$$

Where:

$$20.14 \text{ mmBTU/hr} = \text{Input capacity of heater}^*$$

0.0205 lb/mmcf *= emission factor (EF_{VOC}) of Seneca site natural gas. 0.0205 was adjusted (multiplied) by a factor of 1.0784, which is the ratio of the Seneca natural gas heating value to the average natural gas heating value, or $\frac{1,100 \text{ BTU/cf}}{1,020 \text{ BTU/cf}}$, which is an adjustment allowed per AP42, table 1.4-2, footnote "a."

*as submitted in permittee's application

f. Emissions Limitation:

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

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 9.

g) Miscellaneous Requirements

- (1) None.