



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

5/5/2016

Certified Mail

Weston Threeton
 Rover Pipeline - Clarrington Compressor Station
 1300 Main Street
 Houston, TX 77002

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: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0656025009
 Permit Number: P0118471
 Permit Type: Initial Installation
 County: Monroe

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, Monroe County Beacon. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

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

and Ohio EPA DAPC, Southeast District Office
 2195 Front Street
 Logan, OH 43138

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Southeast District Office at (740)385-8501.

Sincerely,

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

Cc: U.S. EPA Region 5 *Via E-Mail Notification*
 Ohio EPA-SEDO; Pennsylvania; West Virginia

PUBLIC NOTICE

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

Draft Air Pollution Permit-to-Install and Operate Initial Installation
Rover Pipeline - Clarington Compressor Station

.25 miles south of Twp Hwy 204 on German Ridge Rd., Beallsville, OH 43942

ID#:P0118471

Date of Action: 5/5/2016

Permit Desc: Initial installation permit for an oil/gas compressor station consisting of 2-4,735 horsepower (hp) and 1-1,775 hp natural gas compressors; 1-536 hp emergency generator; slop, waste water, oil and coolant storage tanks; slop and waste water truck loading; unpaved roadways and the associated fugitive emissions from engine blowdown/start-up events and equipment leaks.

A public information session and hearing and information session regarding the draft air permit is scheduled for 6 p.m., June 14, 2016, at Monroe Central High School, 469 Lewisville Rd., Woodsfield, OH 43793. A presiding officer will be present and may limit oral testimony at the hearing to ensure all interested parties are heard. Written comments regarding the draft permit may be presented at the hearing or submitted to Ohio EPA by the close of business on June 20, 2016. Comments received after this date will not be considered to be a part of the official record. Written comments may be mailed to: Zorica Dejanovic, Ohio EPA NEDO, 2110 E. Aurora Rd., Twinsburg, OH 44087. Comments also may be emailed to: Zorica.Dejanovic@epa.ohio.gov.

The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the ID # or by contacting or by contacting the Ohio EPA Northeast District Office at (330) 963-1200.

Permit Strategy Write-Up

1. Check all that apply:
Synthetic Minor Determination
Netting Determination
2. Source Description: Clarington Compressor Station is one of seven interstate natural gas pipeline compressor stations for the Rover Pipeline project. This station will consist of: two 4,735 hp natural gas compressors and 1-1,775 hp natural gas compressor; one 536 hp emergency generator; associated fugitive emissions from engine blowdown/start-up events and equipment leaks; storage tanks and truck loading for slop, waste water, oil and coolant; and unpaved roadways
3. Facility Emissions and Attainment Status: Compressor engines are subject to 40 CFR Part 60 Subpart JJJJ and Part 63 Subpart ZZZZ. (Certain sources may be subject to Part 60 Subpart OOOOa upon final release). BAT for the engines is based on the gram/brake horsepower-hour listed on the engine/catalyst data sheets supplied by manufacturer. BAT for all other sources is based on potential to emit.
4. Source Emissions: The majority of emissions will be released from the compressor engines. The engines are controlled by catalysts. Emissions are based on potential to emit without annual restrictions. Energy Transfer stated all engines will not operate at all times but does not wish to restrict operations.
5. Conclusion: Permit requirements include: that each engine operate with a catalyst in place at all times; the installation of a continuous parameter monitoring system (CPMS) to monitor catalyst inlet temperature; pressure drop monitoring; ancillary equipment leak detection and repair program (LDAR); and weekly audio, visual, olfactory (AVO) checks.
6. Please provide additional notes or comments as necessary: None
7. Total Permit Allowable Emissions Summary (for informational purposes only):

Pollutant	Tons/Year
NO _x	61.76
VOC	36.46
CO	23.29
CH ₂ O	7.05
PM	4.12



DRAFT

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Rover Pipeline - Clarrington Compressor Station**

Facility ID:	0656025009
Permit Number:	P0118471
Permit Type:	Initial Installation
Issued:	5/5/2016
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install and Operate
for
Rover Pipeline - Clarrington Compressor Station

Table of Contents

Authorization	1
A. Standard Terms and Conditions	3
1. What does this permit-to-install and operate ("PTIO") allow me to do?.....	4
2. Who is responsible for complying with this permit?	4
3. What records must I keep under this permit?	4
4. What are my permit fees and when do I pay them?.....	4
5. When does my PTIO expire, and when do I need to submit my renewal application?	4
6. What happens to this permit if my project is delayed or I do not install or modify my source?	5
7. What reports must I submit under this permit?	5
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?	5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ...	5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?	6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?	6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently?	6
13. Can I transfer this permit to a new owner or operator?.....	6
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?	7
15. What happens if a portion of this permit is determined to be invalid?	7
B. Facility-Wide Terms and Conditions.....	8
C. Emissions Unit Terms and Conditions	10
1. Emissions Unit Group - 4,735 horsepower (hp) Stationary Spark Ignition (SI) Internal Combustion Engines (ICE): P001, P002	11
2. P003: Stationary Spark Ignition (SI) Internal Combustion Engine (ICE).....	19
3. P004, BDSV.....	26
4. P801, Equipment Leaks: Fugitive emissions from process equipment	29
5. Emissions Unit Group -Truck Loading: J001, J002.....	36



Draft Permit-to-Install and Operate
Rover Pipeline - Clarington Compressor Station
Permit Number: P0118471
Facility ID: 0656025009
Effective Date: To be entered upon final issuance

Authorization

Facility ID: 0656025009
Application Number(s): A0052572
Permit Number: P0118471
Permit Description: Initial installation permit for an oil/gas compressor station consisting of 2-4,735 horsepower (hp) and 1-1,775 hp natural gas compressors; 1-536 hp emergency generator; slop, waste water, oil and coolant storage tanks; slop and waste water truck loading; unpaved roadways and the associated fugitive emissions from engine blowdown/start-up events and equipment leaks
Permit Type: Initial Installation
Permit Fee: \$1,400.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 5/5/2016
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

Rover Pipeline - Clarington Compressor Station
.25 miles south of Twp Hwy 204 on German Ridge Rd
Beallsville, OH 43942

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

Craig W. Butler
Director



Authorization (continued)

Permit Number: P0118471

Permit Description: Initial installation permit for an oil/gas compressor station consisting of 2-4,735 horsepower (hp) and 1-1,775 hp natural gas compressors; 1-536 hp emergency generator; slop, waste water, oil and coolant storage tanks; slop and waste water truck loading; unpaved roadways and the associated fugitive emissions from engine blowdown/start-up events and equipment leaks

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

- | | |
|-----------------------------------|----------------|
| Emissions Unit ID: | P003 |
| Company Equipment ID: | COMP3 |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P004 |
| Company Equipment ID: | BDSV |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P801 |
| Company Equipment ID: | FUG |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |

Group Name: 4,735 horsepower (hp) SI ICE

Emissions Unit ID:	P001
Company Equipment ID:	COMP1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P002
Company Equipment ID:	COMP2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: Truck Loading

Emissions Unit ID:	J001
Company Equipment ID:	LOADING1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	J002
Company Equipment ID:	LOADING2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Draft Permit-to-Install and Operate
Rover Pipeline - Clarington Compressor Station
Permit Number: P0118471
Facility ID: 0656025009
Effective Date: To be entered upon final issuance

A. Standard Terms and Conditions

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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

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

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

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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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

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

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the 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 submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

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

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

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

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



change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

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

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

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

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



Draft Permit-to-Install and Operate
Rover Pipeline - Clarington Compressor Station
Permit Number: P0118471
Facility ID: 0656025009
Effective Date: To be entered upon final issuance

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) B.5.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.
2. The Ohio EPA has determined that this facility is subject to the requirements of 40 CFR Part 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. Although Ohio EPA has determined that this Generally Available Control Technology NESHAP (GACT) applies, 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 this rule are in effect and shall be enforced by U.S. EPA. For more information on the area source rules, please refer to the following U.S. EPA website:
<http://www.epa.gov/ttn/atw/area/arearules.html>.
3. The following emissions units contained in this permit are subject to 40 CFR Part 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines: P001 – P003. The complete NSPS requirements may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the Ohio EPA Southeast District Office.
4. 40 CFR Part 60, Subpart OOOO - Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution does not apply to the storage tanks at this facility. At transmission compressor stations, the standard applies only to storage vessels constructed, modified or reconstructed after August 23, 2011, with VOC emissions equal to or greater than 6 tons per year (tpy). The annual VOC emissions from the proposed storage tanks will not exceed 6 tpy.
5. Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year for those emission units subject to this rule. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified PTIO prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials or use of new materials that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTIO.



Draft Permit-to-Install and Operate
Rover Pipeline - Clarington Compressor Station
Permit Number: P0118471
Facility ID: 0656025009
Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions



1. Emissions Unit Group - 4,735 horsepower (hp) Stationary Spark Ignition (SI) Internal Combustion Engines (ICE): P001, P002

EU ID	Operations, Property and/or Equipment Description
P001	4,735 hp CAT G3616 controlled by an oxidation catalyst
P002	4,735 hp CAT G3616 controlled by an oxidation catalyst

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)	Emissions of formaldehyde (CH ₂ O) shall not exceed 14 ppmvd at 15% O ₂ or emissions of carbon monoxide (CO) shall be reduced by 93% or more. The permittee shall control the emissions of CH ₂ O and CO from the stationary RICE exhaust using an oxidation catalyst control device. See c)(1). The requirements specified by this rule are equivalent to the requirements specified in 40 CFR Part 63, Subpart ZZZZ.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Emissions from the stack serving each engine shall not exceed: 0.5 g/hp-hr of nitrogen oxides (NO _x) 0.19 g/hp-hr of CO 0.32 g/hp-hr of volatile organic compound (VOC) See b)(2)a.
b.	OAC rule 3745-31-05(A)(3) June 30, 2008	Particulate emissions (PE) from each engine shall not exceed 0.13 ton/month averaged over a 12-month rolling period. See b)(2)b and b)(2)c.
c.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30,2008	See b)(2)d.
d.	OAC rule 3745-17-07(A)	Visible PE from the exhaust stack serving each emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-11(B)	PE shall not exceed 0.062 lb/mmBtu of actual heat input.
f.	OAC rule 3745-18-06(G)	These emissions units are exempt from the requirements of OAC rule 3745-18-06 pursuant to OAC rule 3745-18-06(A). See c)(7).
g.	OAC rule 3745-110-03(F)(2)	The emission limitation specified by this rule is less stringent than the emission limitation required per ORC 3704.03(T).
h.	40 CFR Part 60, Subpart JJJJ 40 CFR 60.4233(e)	The NO _x , CO and VOC emission limitations specified by this rule are less stringent than the emission limitations established by ORC 3704.03(T). In accordance with 40 CFR 60.4230, these emissions units are subject to the New Source Performance Standards (NSPS) for Stationary SI ICE. See b)(2)e and c)(8).

(2) Additional Terms and Conditions

- a. The engines shall be operated with a catalyst in place at all times.

- b. The emission limitations for PE are based on the uncontrolled potential to emit (PTE) for this emissions unit, therefore, no monitoring or record keeping is required to document compliance with the emission limitations.
- c. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tpy BAT exemption) into the Ohio State Implementation Plan (SIP).
- d. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tpy BAT exemption) as part of the Ohio SIP:

The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE from this air contaminant source since the controlled potential to emit is less than 10 tons/year.

- e. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart JJJJ, including the following sections:

60.4236(b)	Installation deadlines
60.4243(b)(2)(ii)	Compliance demonstration, maintenance and testing frequency
60.4246, Table 3	Applicability of General Provisions

- f. The permittee must operate and maintain each emissions unit, including the air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

c) **Operational Restrictions**

- (1) The permittee shall install a continuous parameter monitoring system (CPMS) to continuously monitor the catalyst inlet temperature
- (2) The CPMS must collect data at least once every 15 minutes.
- (3) The temperature sensor, for a CPMS measuring temperature range, must have a minimum tolerance of 5.0° F or 1.0% of the measurement range, whichever is larger.
- (4) Except during periods of startup, the permittee shall meet the following operational limitations:
 - a. the pressure drop across the oxidation catalyst shall not change by more than 2” of water at 100% load +/-10% from the pressure drop across the catalyst measured during the initial performance test; and
 - b. maintain the engine exhaust temperature so that the catalyst inlet temperature is greater than or equal to 450°F and less than or equal to 1350°F.
- (5) If the catalyst is changed, the permittee must reestablish the values of the operating parameters measured during the initial performance test. When the operating parameter values are reestablished, the permittee must also conduct a performance test using one

of the methods listed in 40 CFR Part 63, Subpart ZZZZ, Table 4 to demonstrate that the engine is meeting the required emission limitation.

- (6) Each engine’s time spent at idle during startup and the startup time must be minimized to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.
- (7) The permittee shall burn only natural gas in this emissions unit.
- (8) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart JJJJ, including the following sections:

60.4234	Duration of compliance with emission standards
60.4243(e)	Alternative fuel during emergency conditions
60.4243(g)	Air-to-fuel ratio controllers

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

- (1) The permittee shall maintain records of any time period in which the engine(s) were operated without a catalyst installed.
- (2) If a fuel other than natural gas is burned in this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned.
- (3) The permittee shall develop a site-specific monitoring plan for the CPMS that contains the following elements:
 - a. the performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer and data acquisition and calculations;
 - b. sampling interface location (e.g., thermocouple) such that the monitoring system will provide representative measurements;
 - c. equipment performance evaluations, system accuracy audits, or other audit procedures;
 - d. ongoing operation and maintenance procedures; and
 - e. ongoing reporting and record keeping procedures.
- (4) The CPMS shall be installed, operated and maintained continuously in accordance with the site-specific monitoring plan.
- (5) The permittee shall conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in the site-specific monitoring plan at least annually.
- (6) The CPMS performance evaluation shall be conducted in accordance with the site-specific monitoring plan.



- (7) The permittee shall measure and record the pressure drop across the catalyst once per month.
- (8) The permittee shall comply with the applicable monitoring and record keeping requirements of 40 CFR Part 60, Subpart JJJJ, including the following sections:

60.4245(a)(1)	Records of notifications and supporting documentation
60.4243(b)(2)(ii) and 60.4245(a)(2)	Maintenance plan and records of maintenance conducted on the engine

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Southeast District Office.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Southeast District Office by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
- (3) The permittee shall submit notifications and reports to the Ohio EPA, Southeast District Office as required pursuant to 40 CFR Part 60, Subpart JJJJ, per the following sections:

60.4245(c)(1)-(5)	Initial notification
60.4245(d)	Copies of each performance test after completion

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. Emission Limitations:
 Emissions of CH₂O shall not exceed 14 ppmvd at 15% O₂ or emissions of CO shall be reduced by 93% or more.

Applicable Compliance Method:
 Compliance shall be demonstrated based upon the emission testing requirements specified in f)(2).

b. Emission Limitations:
 Emissions from the stack serving each engine unit shall not exceed:

- 0.5 g/hp-hr of NO_x
- 0.19 g/hp-hr of CO
- 0.32 g/hp-hr of VOC

Applicable Compliance Method:
 Compliance shall be demonstrated based upon the emission testing requirements specified in f)(2).



- c. Emission Limitation:
PE from each engine shall not exceed 0.13 ton/month averaged over a 12-month rolling period.

Applicable Compliance Method:

These emissions are based on each engine's PTE and were calculated using the maximum engine rating and fuel consumption by the AP 42 emission factor listed in Table 3.2-2 (7/00)

$$H \times F \times C \times EF \times M \times SF \times (1 \text{ ton}/2,000 \text{ lbs}) = \text{ton/month}$$

where:

H = maximum engine horsepower rating: 4,735 hp;

F = maximum fuel consumption: 7,491 Btu/hp-hr;

C = conversion factor: 1mmBtu/10⁶ Btu;

EF = emission factor for 4SLB natural gas engines: 0.0000771 lb/mmBtu;

M = maximum operating hours/month; and

SF = safety factor, 10%.

- d. Opacity Limitation:
Visible PE from the exhaust stack serving each emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with this emission limitation shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

- e. Emission Limitation:
PE shall not exceed 0.062 lb/mmBtu of actual heat input.

Applicable Compliance Method:

Compliance with this emission limitation may be based upon an emission factor of 0.0000771 lb/mmBtu of heat input. This emission factor is specified in the U.S. EPA reference document AP-42, Compilation of Air Pollutant Emission Factors, Section 3.2, Table 3.2-2 (7/00).

If required, compliance with this emission limitation shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

- (2) The permittee shall conduct, or have conducted, emission testing for these emissions units in accordance with the procedures specified in 40 CFR 60.4244(a) through (g), Table 2 to 40 CFR Part 60, Subpart JJJJ and the following requirements:
 - a. Conduct performance testing in the following manner:
 - i. The permittee shall conduct an initial performance test to demonstrate compliance with the mass emission limitations in 40 CFR 60.4233(e) for

VOC, NO_x and CO, within 1 year of startup and subsequent testing shall be conducted every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance.

- ii. To demonstrate compliance with the formaldehyde emission limitation or reduction requirement for CO, the permittee shall conduct an initial performance test within 180 days of startup and every 6 months (semiannually); except, where following 2 consecutive compliant performance tests, the frequency can be reduced to annually if each such test demonstrates compliance with the CO reduction requirement or formaldehyde emission limitation and where there have been no deviations from operating limitations, to demonstrate compliance with either limit.
- b. Each performance test conducted to determine compliance with 40 CFR Part 60 Subpart JJJJ must be conducted within 10% of 100% peak (or the highest achievable) load and according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 of Subpart JJJJ.
- c. Each performance test conducted to determine compliance with ORC 3704.03(T) for either formaldehyde (CH₂O) or a 93% reduction of emissions of CO shall be conducted according to the requirements in 40 CFR 63.6620 and under the conditions specified by Table 4 of Subpart ZZZZ.
- d. 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 (SEDO). 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, SEDO's refusal to accept the results of the emission test(s).
- e. Personnel from the Ohio EPA, SEDO 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.
- f. 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, SEDO 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, SEDO.



Draft Permit-to-Install and Operate
Rover Pipeline - Clarington Compressor Station
Permit Number: P0118471
Facility ID: 0656025009
Effective Date: To be entered upon final issuance

g) Miscellaneous Requirements

- (1) Proposed amendments to 40 CFR Part 60, Subpart OOOO were published in the Federal Register on September 18, 2015. If final amendments to 40 CFR Part 60, Subpart OOOOa become applicable to this emissions unit, then the permittee shall comply with all applicable provisions of 40 CFR Part 60, Subpart OOOOa and 40 CFR Part 60, Subpart A.



2. P003: Stationary Spark Ignition (SI) Internal Combustion Engine (ICE)

Operations, Property and/or Equipment Description:

1,775 hp CAT G3606 controlled by an oxidation catalyst

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)	<p>Emissions of formaldehyde (CH₂O) shall not exceed 14 ppmvd at 15% O₂ or emissions of carbon monoxide (CO) shall be reduced by 93% or more.</p> <p>The permittee shall control the emissions of CH₂O and CO from the stationary RICE exhaust using an oxidation catalyst control device.</p> <p>See c)(1).</p> <p>The requirements specified by this rule are equivalent to the requirements specified in 40 CFR Part 63, Subpart ZZZZ.</p> <p>Emissions from the stack serving each engine shall not exceed:</p> <p>0.5 g/hp-hr of nitrogen oxides (NO_x) 0.19 g/hp-hr of CO 0.25 g/hp-hr of volatile organic compound (VOC)</p> <p>See b)(2)a.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3) June 30, 2008	Particulate emissions (PE) from each engine shall not exceed 0.13 ton/month averaged over a 12-month rolling period. See b)(2)b and b)(2)c.
c.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	See b)(2)d.
d.	OAC rule 3745-17-07(A)	Visible PE from the exhaust stack serving each emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-11(B)	PE shall not exceed 0.062 lb/mmBtu of actual heat input.
f.	OAC rule 3745-18-06(G)	These emissions units are exempt from the requirements of OAC rule 3745-18-06 pursuant to OAC rule 3745-18-06(A). See c)(7).
g.	OAC rule 3745-110-03(F)(2)	The emission limitation specified by this rule is less stringent than the emission limitation required per ORC 3704.03(T).
h.	40 CFR Part 60, Subpart JJJJ 40 CFR 60.4233(e)	The NO _x , CO and VOC emission limitations specified by this rule are less stringent than the emission limitations established by ORC 3704.03(T). In accordance with 40 CFR 60.4230, these emissions units are subject to the New Source Performance Standards (NSPS) for Stationary SI ICE. See b)(2)e and c)(8).

(2) Additional Terms and Conditions

- a. The engines shall be operated with a catalyst in place at all times.
- b. The emission limitations for PE are based on the uncontrolled potential to emit (PTE) for this emissions unit, therefore, no monitoring or record keeping is required to document compliance with the emission limitations.
- c. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tpy BAT exemption) into the Ohio State Implementation Plan (SIP).
- d. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tpy BAT exemption) as part of the Ohio SIP:

The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE from this air contaminant source since the controlled potential to emit is less than 10 tons/year.
- e. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart JJJJ, including the following sections:



60.4236(b)	Installation deadlines
60.4243(b)(2)(ii)	Compliance demonstration, maintenance and testing frequency
60.4246, Table 3	Applicability of General Provisions

f. The permittee must operate and maintain each emissions unit, including the air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

c) Operational Restrictions

- (1) The permittee shall install a continuous parameter monitoring system (CPMS) to continuously monitor the catalyst inlet temperature
- (2) The CPMS must collect data at least once every 15 minutes.
- (3) The temperature sensor, for a CPMS measuring temperature range, must have a minimum tolerance of 5.0° F or 1.0% of the measurement range, whichever is larger.
- (4) Except during periods of startup, the permittee shall meet the following operational limitations:
 - a. the pressure drop across the oxidation catalyst shall not change by more than 2" of water at 100% load +/-10% from the pressure drop across the catalyst measured during the initial performance test; and
 - b. maintain the engine exhaust temperature so that the catalyst inlet temperature is greater than or equal to 450°F and less than or equal to 1350°F.
- (5) If the catalyst is changed, the permittee must reestablish the values of the operating parameters measured during the initial performance test. When the operating parameter values are reestablished, the permittee must also conduct a performance test using one of the methods listed in 40 CFR Part 63, Subpart ZZZZ, Table 4 to demonstrate that the engine is meeting the required emission limitation.
- (6) Each engine's time spent at idle during startup and the startup time must be minimized to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.
- (7) The permittee shall burn only natural gas in this emissions unit.
- (8) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart JJJJ, including the following sections:

60.4234	Duration of compliance with emission standards
60.4243(e)	Alternative fuel during emergency conditions
60.4243(g)	Air-to-fuel ratio controllers

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain records of any time period in which the engine(s) were operated without a catalyst installed.
- (2) If a fuel other than natural gas is burned in this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned.
- (3) The permittee shall develop a site-specific monitoring plan for the CPMS that contains the following elements:



- a. the performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer and data acquisition and calculations;
 - b. sampling interface location (e.g., thermocouple) such that the monitoring system will provide representative measurements;
 - c. equipment performance evaluations, system accuracy audits, or other audit procedures;
 - d. ongoing operation and maintenance procedures; and
 - e. ongoing reporting and record keeping procedures.
- (4) The CPMS shall be installed, operated and maintained continuously in accordance with the site-specific monitoring plan.
- (5) The permittee shall conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in the site-specific monitoring plan at least annually.
- (6) The CPMS performance evaluation shall be conducted in accordance with the site-specific monitoring plan.
- (7) The permittee shall measure and record the pressure drop across the catalyst once per month.
- (8) The permittee shall comply with the applicable monitoring and record keeping requirements of 40 CFR Part 60, Subpart JJJJ, including the following sections:

60.4245(a)(1)	Records of notifications and supporting documentation
60.4243(b)(2)(ii) and 60.4245(a)(2)	Maintenance plan and records of maintenance conducted on the engine

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Southeast District Office.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Southeast District Office by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
- (3) The permittee shall submit notifications and reports to the Ohio EPA, Southeast District Office as required pursuant to 40 CFR Part 60, Subpart JJJJ, per the following sections:

60.4245(c)(1)-(5)	Initial notification
60.4245(d)	Copies of each performance test after completion

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. Emission Limitations:
Emissions of CH₂O shall not exceed 14 ppmvd at 15% O₂ or emissions of CO shall be reduced by 93% or more.
- Applicable Compliance Method:
Compliance shall be demonstrated based upon the emission testing requirements specified in f)(2).
- b. Emission Limitations:
Emissions from the stack serving each engine unit shall not exceed:
- 0.5 g/hp-hr of NO_x
0.19 g/hp-hr of CO
0.25 g/hp-hr of VOC
- Applicable Compliance Method:
Compliance shall be demonstrated based upon the emission testing requirements specified in f)(2).
- c. Emission Limitation:
PE from each engine shall not exceed 0.13 ton/month averaged over a 12-month rolling period.
- Applicable Compliance Method:
These emissions are based on each engine's PTE and were calculated using the maximum engine rating and fuel consumption by the AP 42 emission factor listed in Table 3.2-2 (7/00)
- $$H \times F \times C \times EF \times M \times SF \times (1 \text{ ton}/2,000 \text{ lbs}) = \text{ton/month}$$
- where:
H = maximum engine horsepower rating: 1,775 hp;
F = maximum fuel consumption: 7,595 Btu/hp-hr;
C = conversion factor: 1mmBtu/10⁶ Btu;
EF = emission factor for 4SLB natural gas engines: 0.0000771 lb/mmBtu;
M = maximum operating hours/month; and
SF = safety factor, 10%.
- d. Opacity Limitation:
Visible PE from the exhaust stack serving each emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
- Applicable Compliance Method:
If required, compliance with this emission limitation shall be demonstrated through visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.
- e. Emission Limitation:
PE shall not exceed 0.062 lb/mmBtu of actual heat input.

Applicable Compliance Method:

Compliance with this emission limitation may be based upon an emission factor of 0.0000771 lb/mmBtu of heat input. This emission factor is specified in the U.S. EPA reference document AP-42, Compilation of Air Pollutant Emission Factors, Section 3.2, Table 3.2-2 (7/00).

If required, compliance with this emission limitation shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

- (2) The permittee shall conduct, or have conducted, emission testing for these emissions units in accordance with the procedures specified in 40 CFR 60.4244(a) through (g), Table 2 to 40 CFR Part 60, Subpart JJJJ and the following requirements:
- a. Conduct performance testing in the following manner:
 - i. The permittee shall conduct an initial performance test to demonstrate compliance with the mass emission limitations in 40 CFR 60.4233(e) for VOC, NO_x and CO, within 1 year of startup and subsequent testing shall be conducted every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance.
 - ii. To demonstrate compliance with the formaldehyde emission limitation or reduction requirement for CO, the permittee shall conduct an initial performance test within 180 days of startup and every 6 months (semiannually); except, where following 2 consecutive compliant performance tests, the frequency can be reduced to annually if each such test demonstrates compliance with the CO reduction requirement or formaldehyde emission limitation and where there have been no deviations from operating limitations, to demonstrate compliance with either limit.
 - b. Each performance test conducted to determine compliance with 40 CFR Part 60 Subpart JJJJ must be conducted within 10% of 100% peak (or the highest achievable) load and according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 of Subpart JJJJ.
 - c. Each performance test conducted to determine compliance with ORC 3704.03(T) for either formaldehyde (CH₂O) or a 93% reduction of emissions of CO shall be conducted according to the requirements in 40 CFR 63.6620 and under the conditions specified by Table 4 of Subpart ZZZZ.
 - d. 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 (SEDO). 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, SEDO's refusal to accept the results of the emission test(s).



- e. Personnel from the Ohio EPA, SEDO 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.
 - f. 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, SEDO 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, SEDO.
- g) **Miscellaneous Requirements**
- (1) Proposed amendments to 40 CFR Part 60, Subpart OOOO were published in the Federal Register on September 18, 2015. If final amendments to 40 CFR Part 60, Subpart OOOOa become applicable to this emissions unit, then the permittee shall comply with all applicable provisions of 40 CFR Part 60, Subpart OOOOa and 40 CFR Part 60, Subpart A.



3. P004, BDSV

Operations, Property and/or Equipment Description:

Compressor blowdowns and engine start-up events

- 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) June 30, 2008	Volatile organic compound (VOC) emissions from all blowdown/starter vents shall not exceed 0.02 ton/month averaged over a 12-month rolling period. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	See b)(2)b.

- (2) Additional Terms and Conditions
 - a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tpy BAT exemption) into the Ohio State Implementation Plan (SIP).
 - b. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tpy BAT exemption) as part of the Ohio SIP:



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

- c) Operational Restrictions
 - (1) The permittee shall minimize the frequency and size of blowdown/starter vents 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 monthly records of the following information:
 - a. number and the type of each blowdown/starter vent;
 - b. the total VOC percentage in the gas stream using the most recent representative analysis;
 - c. the estimated volume of gas emitted from all blowdowns/starter vents for each month, in scf; and
 - d. the rolling, 12-month summation of the VOC emissions, in ton/month, from all blowdowns/starter vents as calculated in f)(1)a.
- e) Reporting Requirements
 - (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Southeast District Office.
 - (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Southeast District Office by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
- f) Testing Requirements
 - (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
VOC emissions shall not exceed 0.02 ton/month averaged over a 12-month rolling period.

Applicable Compliance Method:
This emission limitation is based on the predicted maximum annual blowdown/starter vent occurrences. Compliance with the VOC emission limitation shall be demonstrated by the summation of monthly emissions from blowdown and starter vents and based upon the following calculations using the inputs provided in the application and the record keeping requirements in d)(1):



$$\text{VOC (ton/month)} = B_{\text{total}} + SV_{\text{total}}$$

where:

B_{total} = total blowdown emissions, in tons; and
 SV_{total} = total starter vent emissions, in tons.

Emissions shall be calculated using the following equation:

$$(\text{VGSE})/\text{CF} = \text{total emissions from either blowdown or starter vents}$$

where:

V = maximum VOC percentage in gas stream, wt % (based on the most recent gas stream representative analysis);
G = gas stream density, lb/scf, calculated by multiplying the specific gravity of the gas stream, by the MW (lb/mole) by the conversion (1 lb-mol/ 379.4 scf);
S = estimated volume of gas in the blowdown or starter vent, scf;
E = total events per month; and
CF = conversion factor (2,000 lbs/ton).

- g) Miscellaneous Requirements
 - (1) None.



4. P801, Equipment Leaks: Fugitive emissions from process equipment

Operations, Property and/or Equipment Description:

Fugitive emissions from: valves, seals, flanges, connectors and open-ended lines

- 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) June 30, 2008	Fugitive volatile organic compound (VOC) emissions shall not exceed 0.05 ton/month averaged over a 12-month rolling period. See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	See b)(2)b.

- (2) Additional Terms and Conditions
 - a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tpy BAT exemption) into the Ohio State Implementation Plan (SIP).
 - b. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tpy BAT exemption) as part of the Ohio SIP:

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

c) Operational Restrictions

(1) Ancillary Equipment Leak Detection and Repair Program

The permittee shall develop and implement a leak detection and repair program designed to monitor and repair leaks from ancillary equipment covered by this permit, including each pump, compressor seal, pressure relief device, connector, valve, flange, vent, cover, any bypass in the closed vent system, and each storage vessel in VOC service. As noted below in d)(2)b., a component is considered not in VOC service if it can be determined that the VOC content of the process fluid, which is contained in or contacts the piece of equipment, can be reasonably expected never to exceed 10% by weight. This program shall meet the following requirements:

- a. Leaks shall be detected by the use of either a "Forward Looking Infra-Red" (FLIR) camera or an analyzer meeting U.S. EPA Method 21 of 40 CFR Part 60, Appendix A.
- b. An initial monitoring shall be completed within 90 days of startup and quarterly thereafter for a period of four consecutive quarters (1 year).
- c. If following the initial four consecutive quarters, less than or equal to 2.0% of the ancillary equipment are determined to be leaking during the most recent quarterly monitoring event, then the frequency of monitoring can be reduced to semi-annual.
- d. If following two consecutive semi-annual periods, less than 2.0% of the ancillary equipment are determined to be leaking during the most recent semi-annual monitoring event, then the frequency of the monitoring can be reduced to annual.
- e. If more than or equal to 2.0% of the ancillary equipment are determined to be leaking during any one of the semi-annual or annual monitoring events, then the frequency of monitoring shall be returned to quarterly.
- f. The program shall require the first attempt at repair within five (5) calendar days of determining a leak.
- g. The program shall require that the leaking component is repaired within 30 calendar days after the leak is detected.
- h. The program shall allow for the delayed repair of a leaking component following the language found in 40 CFR 60.5416(c)(5).
- i. The program shall follow the Monitoring and Record Keeping requirements described in paragraph 5.d) of this permit.

- (2) In the event that a leak or defect is detected in the cover, closed vent system, process equipment, or control device, the permittee shall make a first attempt at repair no later

than 5 calendar days after the leak is detected. Repair shall be completed no later than 30 calendar days after the leak is detected as allowed in 40 CFR 60.5416(c)(4). Any delay of repair of a leak or defect shall meet the requirements of 40 CFR 60.5416(c)(5).

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

- (1) The permittee shall perform weekly audio, visual and olfactory (AVO) checks to detect possible leaks from pressure relief valves and equipment. Results of the AVO checks shall be maintained in an operations log and include the following:
 - a. name of inspector;
 - b. date and time of inspection;
 - c. company identification of leaking equipment and/or pressure relief valve;
 - d. estimated/calculated duration of release and/or leak and total emissions; and
 - e. corrective actions taken to minimize/eliminate release/leak.
- (2) Within 180 days of startup, the permittee shall develop a list of components not in VOC service and the information or data used to demonstrate that the equipment is not in VOC service. This can be in the form of:
 - a. A written or electronic component log or identification on the facility piping and instrumentation drawings (PID).
 - b. A component is considered not in VOC service if it can be determined that the VOC content of the process fluid, which is contained in or contacts the piece of equipment, can be reasonably expected never to exceed 10% by weight.
- (3) **Ancillary Equipment Leak Detection and Repair Program Monitoring and Record Keeping for Programs Utilizing FLIR Camera's**
 - a. Leaks shall be determined by visually observing each ancillary component through the FLIR camera to determine if leaks are visible.
 - b. The following information shall be recorded during each leak inspection:
 - i. the date the inspection was conducted;
 - ii. the name of the employee conducting the leak check;
 - iii. the identification of any component that was determined to be leaking;
 - iv. the date the first attempt to repair the component was made;
 - v. the reason the repair was delayed following the language found in 40 CFR 60.5416(c)(5);
 - vi. the date the component was repaired and determined to no longer be leaking;



- vii. the total number of components that are leaking; and
- viii. the percentage of components leaking, determined as the sum of the number of components for which a leak was detected, divided by the total number of ancillary components capable of developing a leak, and multiplied by 100.
- c. The permittee shall maintain records that demonstrate the FLIR camera is operated and maintained in accordance with the manufacturer’s operation and maintenance instructions.
- d. The records from each inspection and the dates each leak is detected and repaired shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.

(4) Ancillary Equipment Leak Detection and Repair Program Monitoring and Record Keeping for Programs Utilizing a Method 21 Analyzer

- a. Leaks shall be measured by utilizing U.S. EPA Method 21 (40 CFR Part 60, Appendix A). All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm or 10,000 ppm (as applicable) for determining compliance.
- b. A component is considered to be leaking if the instrument reading is equal to or greater than:

pressure relief device in gas/vapor service	10,000 ppm
pressure relief device in light liquid service	10,000 ppm
pumps in light liquid service	10,000 ppm
compressor seals	500 ppm
sampling connection system*	*
open ended valves or lines**	**
valves in gas/vapor and light liquid service	10,000 ppm
closed vent system	500 ppm
connectors	10,000 ppm
all other ancillary and associated equipment in VOC service	10,000 ppm
must be equipped with a closed-purge, closed-loop, or closed-vent system	
must be equipped with a cap, blind flange, plug, or a second valve	

- c. The following information shall be recorded during each leak inspection:
 - i. the date the inspection was conducted;
 - ii. the name of the employee conducting the leak check;
 - iii. the identification of any component that was determined to be leaking (company ID and component type (flange, pump, etc.);
 - iv. the date the first attempt to repair the component was made;

- v. the reason the repair was delayed following the language found in 40 CFR 60.5416(c)(5);
 - vi. the date the component was repaired and determined to no longer be leaking;
 - vii. the total number of components that are leaking; and
 - viii. the percentage of components leaking, determined as the sum of the number of components for which a leak was detected, divided by the total number of ancillary components capable of developing a leak, and multiplied by 100.
- d. The permittee shall maintain records that demonstrate the Method 21 analyzer is operated and maintained in accordance with the manufacturer's operation and maintenance instructions.
- e. In order to calibrate the analyzer, the following calibration gases shall be used:
- i. zero air, which consists of less than 10 ppm of hydrocarbon in air; and
 - ii. a mixture of air and methane or n-hexane at a concentration of approximately, but less than, 10,000 ppm of methane or n-hexane.
- f. The records from each inspection and the dates each leak is detected and repaired shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.
- (5) The permittee shall meet all applicable requirements of 40 CFR Part 98, Mandatory Greenhouse Gas Reporting, for onshore natural gas transmission, including annual monitoring of fugitive components using leak detection equipment such as optical gas instrument cameras (FLIR) or other approved instruments. Leaks discovered during these surveys will be repaired in a prudent and timely manner.
- e) Reporting Requirements
- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Southeast District Office.
 - (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Southeast District Office by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
 - (3) The permittee shall identify the following in the PER:
 - a. the date of the inspection;
 - b. the number of components determined to be leaking;



- c. the company ID and component type (flange, pump, etc.) of each leaking component;
- d. the total number of components at the site;
- e. the percent of components determined to be leaking;
- f. a list of all components that have not been repaired due to a delay of repair and the reason for the delay; and
- g. a notification indicating if the permittee has changed future inspection frequencies based on the percent of components leaking.

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. Emission Limitation:
 Fugitive VOC emissions shall not exceed 0.05 ton/month averaged over a 12-month rolling period.

Applicable Compliance Method:
 Emissions shall be calculated using the emission factors from the Technical Guidance Document for Equipment Leak Fugitives (October, 2000) for components in gas, water and heavy liquid service.

$$\text{Component Type (\# of components)} \times \text{emission factor} \times \% \text{ VOC}^* = \text{lb/hr}$$

Gas/Vapor Service

- Number of connectors (682) x 0.000441 lb/hr x % VOC = lb/hr
- Number of valves (239) x 0.00992 lb/hr x % VOC = lb/hr
- Number of flanges (138) x 0.00086 lb/hr x % VOC = lb/hr
- Number of compressor seals (16) x 0.0194 lb/hr x % VOC = lb/hr
- Number of relief valves (36) x 0.0194 lb/hr x % VOC = lb/hr

*where: % VOC = 2.00 per company's analysis

Light Oil Service

- Number of connectors (167) x 0.000243 lb/hr x % VOC = lb/hr
- Number of valves (16) x 0.000216 lb/hr x % VOC = lb/hr
- Number of flanges (22) x 0.000006 lb/hr x % VOC = lb/hr
- Number of other components (0) x 0.00055 lb/hr x % VOC = lb/hr

*where: % VOC = 100 per company's analysis



Heavy Liquid

Number of connectors (252) x 0.0000165 lb/hr x % VOC = lb/hr

Number of valves (40) x 0.0000185 lb/hr x % VOC = lb/hr

Number of pump seals (0) x 0.00113 lb/hr x % VOC = lb/hr

Number of flanges (0) x 0.00000086 lb/hr x % VOC = lb/hr

*where: % VOC = 100 per company's analysis

The monthly emissions from ancillary and associated equipment shall be documented from the summation of the calculations listed below, multiplied by (8,760 hours/year), the conversion factor (1 ton/2,000 pounds) and divided by (12 months/year).

g) Miscellaneous Requirements

- (1) Proposed amendments to 40 CFR Part 60, Subpart OOOO were published in the Federal Register on September 18, 2015. If final amendments to 40 CFR Part 60, Subpart OOOOa become applicable to this emissions unit, then the permittee shall comply with all applicable provisions of 40 CFR Part 60, Subpart OOOOa and 40 CFR Part 60, Subpart A.



5. Emissions Unit Group -Truck Loading: J001, J002

EU ID	Operations, Property and/or Equipment Description
J001	Truck load-out from slop tank containing liquids removed from inlet/outlet separators
J002	Truck load-out from waste-water tank

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 3745-31-03(A) June 30, 2008	Fugitive volatile organic compound (VOC) emissions shall not exceed 0.0002 ton/month, as a rolling, 12-month summation. See b)(2)a.
b.	OAC rule 3745-31-03(A)(3)(ii) June 30, 2008	See b)(2)b.

(2) Additional Terms and Conditions

a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tpy BAT exemption) into the Ohio State Implementation Plan (SIP).

b. These requirements apply once U.S. EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the less than 10 tpy BAT exemption) as part of the Ohio SIP:

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

- c. All truck loading lines shall be equipped with fittings which are vapor tight.
- d. The hatches on the vehicle being loaded shall be closed at all times during the loading of the vessel.
- e. The permittee shall not permit slop to be spilled, discarded in sewers, stored in open containers or handled in any other manner that would result in evaporation.

c) **Operational Restrictions**

- (1) Prior to connecting the transfer line(s) from the tank to the tank truck, the permittee shall inspect all fittings, valves, gaskets and fasteners that will be used during the transfer to ensure they are in proper condition (i.e., not corroded, torn, worn, stripped or otherwise damaged) and will result in vapor tight connections.
- (2) During the loading from the tank to the tank truck, the permittee shall continually monitor the transfer equipment, the tank and the tank truck for any leaks through visual, olfactory, or other observations. If any leak is detected, loading shall cease until the leaking component has been repaired.

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

- (1) The permittee shall collect and record the following each month:
 - a. the amount of throughput from each slop/wastewater tank, in gallons; and
 - b. the monthly VOC emissions as calculated in section f)(1)a, in tons.

e) **Reporting Requirements**

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the Southeast District Office.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Southeast District Office by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) **Testing Requirements**

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



- a. Emission Limitation:
Fugitive VOC emissions shall not exceed 0.0002ton/month, as a rolling, 12-month summation.

Applicable Compliance Method:

VOC emissions from each tank shall be determined by multiplying the loading loss factor (L) by the rolling, 12-month summation of the throughput, in gallons, by the conversion (1 ton/2,000 pounds).

The loading loss factor was derived using Equation (1) from AP-42, Section 5.2.2.1.1, Equation 1 (6/08).

$$L = 12.46 \text{ SMP/T}$$

where:

L = loading loss, lb/10³ gal of liquid loaded;

S = saturation factor, 0.6 for submerged fill;

M = molecular weight of vapor, lb/lb-mole: (slop 21.93), (wastewater 21.78);

P = true vapor pressure of liquid loaded, 0.20 average psia; and

T = temperature of bulk liquid, = 510.84 Rankine (average 51.17°F).

- g) Miscellaneous Requirements

(1) None.