



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

9/14/2016

Certified Mail

Weston Threeton
 Rover Pipeline - Cadiz 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: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0634005110
 Permit Number: P0118472
 Permit Type: Initial Installation
 County: Harrison

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**
- **What should you do if you notice a spill or environmental emergency?**

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.

What should you do if you notice a spill or environmental emergency?

Any spill or environmental emergency which may endanger human health or the environment should be reported to the Emergency Response 24-HOUR EMERGENCY SPILL HOTLINE toll-free at (800) 282-9378. Report non-emergency complaints to the appropriate district office or local air agency.

If you have any questions regarding your permit, 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 E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: Ohio EPA-SEDO

Response to Comments

Facility ID:	0634005110
Facility Name:	Rover Pipeline - Cadiz Compressor Station
Facility Description:	Natural Gas Compressor Station
Facility Address:	Industrial Park Rd 1.2mi S of Cadiz-Piedmont Rd Cadiz, OH 43907 Harrison County
Permit:	P0118472, Permit-To-Install - Initial Installation
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the Harrison News Herald on 05/14/2016. The comment period ended on 06/27/2016.	
Hearing date (if held)	06/21/2016
Hearing Public Notice Date (if different from draft public notice)	

Agency Contacts for this Project:

Division of Air Pollution Control: Jana Gannon, 330-963-1261, Jana.Gannon@epa.ohio.gov
Public Interest Center: Mike Settles, 614-644-2160, Michael.Settles@epa.ohio.gov

Comments:

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

Comment 1: A citizen expressed concerns about the health and environmental effects of the compressor station on the community. There were specific concerns about methane leaks and toxins.

Response 1: Ohio EPA has a legal obligation to evaluate proposed emissions sources and determine whether or not they are able to comply with all applicable state and federal air pollution control regulations. The Cadiz Compressor Station air permit documents what the facility must do in order to comply with these regulations. The air permit is divided into different emissions units which have pollutant-specific emissions limitations and control measures which are based on state and federal rules. Compliance with these limitations and measures are based on operational restrictions, monitoring, recordkeeping, reporting and testing requirements that are listed in the permit. As long as the emissions sources meet the permit terms and conditions, the potential emissions are not expected to cause adverse health and welfare effects.

The emissions limits established through the permit are protective of human health and welfare. Modeling was performed on pollutants of concern, including air toxics, which demonstrated that there would not be health impacts to the community.

The compressor engines are the largest source of emissions. They are required to be tested for emissions every 8,760 hours of engine operation or three years, whichever comes first. They also have continuous monitors for the inlet temperature and pressure drop on the catalyst to verify proper operation.

Any methane leaks from the compressor station components must be monitored under the facility's quarterly fugitive emissions monitoring program and the weekly audio, visual and olfactory checks. The quarterly checks are performed using either an analyzer or optical gas imaging equipment and are required to be performed in accordance with the requirements in the Leak Detection and Repair Program as specified in the permit.

Ohio EPA will monitor ongoing compliance with the air permit through on-site compliance inspections, test observations and complaint investigations, in addition to the company's quarterly and annual reporting requirements.

Comment 2: Five statements were received in support of the compressor station.

Response 2: No response necessary.

The remaining comments are from U.S. EPA (page numbers and emissions are specific to Mainline CS-1 permit, but comments apply to all Rover permits in general):

Comment 3: Permit conditions 3.g(1) on page 26 of 36 and 4.g(1) on page 33 of 36, as well as item 4 of the Permit Strategy Write-Up, states that some of the source's emissions units may be subject to 40 CFR Part 60, Subpart 0000 once that rule's proposed amendments get finalized. The proposed amendments were finalized on May 12, 2016, so please indicate whether any of the emissions units are subject to this New Source Performance Standard and, if so, please add the applicable requirements to the permit.

Response 3: This term has been removed. 40 CFR Part 60, Subpart 0000a is not applicable to this compressor station because the company has submitted information that demonstrates they commenced construction prior to September 18, 2015 (the date specified in 40 CFR 60.5365a).

Comment 4: Permit condition 1.c(1) on page 14 of 36 contains the following vague language: "by conducting routine operation and maintenance activities in a manner consistent with safety and good air pollution control practices." To improve the enforceability of the permit language, please specify the safety and good air pollution control practices for this source and list them in the permit as permit requirements.

Response 4: This language was intended to encourage the company to minimize blowdown and starter vent frequency to the extent practical. Due to the dryness of the gas and the low volatile organic compounds (VOC) content of the material released, no further permit requirements are necessary.

Comment 5: For the Pigging - operation on page 17 of 36, please consider the information in the attached EPA Discussion Draft "Quantifying the Potential Impact of Natural Gas Condensate Holdup on Uncontrolled Vola

tile Organic Compound Emissions from Pig Receivers During Depressurization in Wet Gas Gathering Operations"

(Attachment A) for use in the compliance method listed in permit condition 2.f(1)(a) on page 19 of 36 of the permit.

Condensed liquids may be present in the pig receiver and volatilize as pressure in the pig receiver is reduced from pipeline pressure to atmospheric pressure during the process of pig retrieval. These volatilized liquids are ultimately emitted to the atmosphere and can comprise a significant portion of total VOCs emitted during pigging operations, especially from pipelines that transport wet gas.

Response 5: The Rover system will receive and transport dry, pipeline quality gas throughout its transmission lines. The gas received will be free of water and hydrocarbons in the liquid state, and shall be less than 1100 Btu per cubic foot. Due to the dryness of the gas, no liquid condensate is expected in the pig receivers. In reviewing the EPA Discussion Draft "Quantifying the Potential Impacts of Natural Gas Condensate Holdup on Uncontrolled Volatile Organic Compound Emissions from Pig Receivers During Depressurization in Wet Gas Gathering Operations", it is apparent that the discussion is focused on wet, production and midstream gathering systems. The VOC weight percentages in the two examples within the study ranged from 22-25 percent. In contrast, Rover's anticipated gas stream represented in its applications is 2 percent VOC by weight.

Comment

6:
Permit condition 3.c.1(i) on page 21 of 36 requires a leak detection and repair (LDAR) program for the process equipment leaks, and that it shall follow the monitoring and record keeping requirements described in permit condition 5.d, but permit condition 5.d (on page 35 of 36) pertains to the amount of throughput and emissions from each slop/wastewater tank. Please explain how that relates to the LDAR program for the process equipment leaks.

Response 6: This language has been revised to the following:

The program shall follow the monitoring and record keeping requirements described in paragraphs d)(3) and d)(4) of this permit.

Comment 7:

It's unclear whether this permit is a major, minor or synthetic minor source permit because there is contradictory information on the permits' cover page and the Permit Strategy Write-Up. The table on the permit cover page indicates that the permit is neither a Prevention of Significant Deterioration major source nor an existing permit, but items 1, 4, and 7 in the Permit Strategy Write-Up contradict that by indicating: both a synthetic minor determination and an existing determination has been made for this source (item 1); engine emissions exceed major source thresholds (item 4); and that the nitrogen oxide (NOx) emissions are 103.69 tons per year (tpy) and the formaldehyde emissions are 13.14 tpy (item 7) indicating that the source is major for NOx and hazardous air pollutants (formaldehyde). Please clarify the status of the source/permit. If it is major, the permit would need to go through major New Source Review, if the source is synthetic minor, restrictions would



Response to Comments
Rover Pipeline - Cadiz Compressor Station
Permit Number: P0118472
Facility ID: 0634005110

Idneedtobeaddedtothepermit,andifitisa nettingpermit,thedraftpermitwouldneedtocontainthenettinganalysis.

Response 7: The Cadiz compressor station is not major for Title V purposes, nor New Source Review. This is stated correctly on the permit's cover page. The Permit Strategy Write-Up will be revised to make it clear that the source is not major for Title V purposes, nor New Source Review. The check boxes on the Permit Strategy Write-Up document are not checked for synthetic minor or netting, which indicates that they don't apply.



FINAL

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

Facility ID:	0634005110
Permit Number:	P0118472
Permit Type:	Initial Installation
Issued:	9/14/2016
Effective:	9/14/2016
Expiration:	9/14/2026



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

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Final Permit-to-Install and Operate
Rover Pipeline - Cadiz Compressor Station
Permit Number: P0118472
Facility ID: 0634005110
Effective Date: 9/14/2016

Authorization

Facility ID: 0634005110
Application Number(s): A0052627
Permit Number: P0118472
Permit Description: Initial installation permit for an oil/gas compressor station consisting of three (3)-4,735 horsepower (hp) and one (1)-1,775 hp natural gas compressor; one (1)-1,005 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: \$1,800.00
Issue Date: 9/14/2016
Effective Date: 9/14/2016
Expiration Date: 9/14/2026
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Rover Pipeline - Cadiz Compressor Station
Industrial Park Rd
1.2mi S of Cadiz-Piedmont Rd
Cadiz, OH 43907

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: P0118472

Permit Description: Initial installation permit for an oil/gas compressor station consisting of three (3)-4,735 horsepower (hp) and one (1)-1,775 hp natural gas compressor; one (1)-1,005 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: | P004 |
| Company Equipment ID: | COMP4 |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P005 |
| Company Equipment ID: | BDSV |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | P006 |
| Company Equipment ID: | PIGGING |
| 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 hp

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
Emissions Unit ID:	P003
Company Equipment ID:	COMP3
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



Final Permit-to-Install and Operate
Rover Pipeline - Cadiz Compressor Station
Permit Number: P0118472
Facility ID: 0634005110
Effective Date: 9/14/2016

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



Final Permit-to-Install and Operate
Rover Pipeline - Cadiz Compressor Station
Permit Number: P0118472
Facility ID: 0634005110
Effective Date: 9/14/2016

A. Standard Terms and Conditions

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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

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

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

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

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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



Final Permit-to-Install and Operate
Rover Pipeline - Cadiz Compressor Station
Permit Number: P0118472
Facility ID: 0634005110
Effective Date: 9/14/2016

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.
2. The 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 – P004. 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.



Final Permit-to-Install and Operate
Rover Pipeline - Cadiz Compressor Station
Permit Number: P0118472
Facility ID: 0634005110
Effective Date: 9/14/2016

C. Emissions Unit Terms and Conditions

1. Emissions Unit Group -4,735 horsepower (hp) Stationary Spark Ignition (SI) Internal Combustion Engines (ICE): P001, P002, P003,

EU ID	Operations, Property and/or Equipment Description
P001	4,735 hp CAT G3616 natural gas compressor w/catalyst
P002	4,735 hp CAT G3616 natural gas compressor w/catalyst
P003	4,735 hp CAT G3616 natural gas compressor w/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>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Emissions from the stack serving each emissions unit shall not exceed:</p> <p>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)</p> <p>See b)(2)a.</p>
b.	OAC rule 3745-31-05(A)(3) June 30, 2008	<p>Particulate emissions (PE) from each engine shall not exceed 0.13 ton/month averaged over a 12-month rolling period.</p> <p>See b)(2)b and b)(2)c.</p>
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 particulate emissions (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)	<p>These emissions units are exempt from the requirements of OAC rule 3745-18-06 pursuant to OAC rule 3745-18-06(A).</p> <p>See c)(7).</p>
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)	<p>The NO_x, CO and VOC emission limitations specified by this rule are less stringent than the limitations established by ORC 3704.03(T).</p> <p>In accordance with 40 CFR 60.4230, these emissions units are subject to the New Source Performance Standards (NSPS) for Stationary SI ICE.</p> <p>See b)(2)e and c)(8).</p>

(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

- (9) The height of the stacks serving the engines listed below shall not be less than the following:

Emissions Unit	Engine ID	Engine Model	Stack Height
P001	COMP1	CAT G3616	55 ft.
P002	COMP2	CAT G3616	55 ft.
P003	COMP3	CAT G3616	55 ft.

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 emissions 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)

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

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: 0.0099871 lb/mmBtu; and
M = maximum operating hours/month.

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) None.

2. P004: 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 emissions unit shall not exceed:</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		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) See b)(2)a.
b.	OAC rule 3745-31-05(A)(3) June 30, 2008	Particulate emissions (PE) from each engine shall not exceed 0.05 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 particulate emissions (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

- (9) The height of the stack serving the engine listed below shall not be less than the following:

Emissions Unit	Engine ID	Engine Model	Stack Height
P004	COMP4	CAT G3606	50 ft.

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 emissions 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 0.05 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)

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

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: 0.0099871 lb/mmBtu; and

M = maximum operating hours/month.

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) None.

3. P005, 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 0.03 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 0.03 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. P006, PIGGING

Operations, Property and/or Equipment Description:

Pigging Operations

- 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
 - (3) 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 0.003 ton/month averaged over a 12-month rolling period. See b)(2)a and b)(2)c.
b.	OAC rule 3745-31-05(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 from this air contaminant source since the uncontrolled potential to emit for VOC is less than 10 tpy.

- c. The permittee shall maintain a written operating manual for pig launching and recovery. The manual shall include, at a minimum, procedures for minimizing the duration and frequency of the pigging activities, and a training program for the operators performing the activities.

c) Operational Restrictions

- (1) The permittee shall minimize the emissions of VOC from the pigging activities to the extent practicable.
- (2) Access openings to the receivers shall be kept closed at all times, except when a pig is being placed into or removed from the receiver, or during active maintenance operations.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information:
 - a. number of pigging events;
 - b. the total VOC percentage in the gas stream using the most recent representative analysis;
 - c. the estimated volume of gas emitted from all pigging for each month, in scf; and
 - d. the rolling, 12-month summation of the VOC emissions, in ton/month, from all pigging 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:

Fugitive VOC emissions shall not exceed 0.003 ton/month averaged over a 12-month rolling period.

Applicable Compliance Method:

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

$$\text{VOC (ton/month)} = (\text{VGSE})/\text{CF}$$

where:

V = maximum VOC percentage in the 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 pigging event, scf;

E = total events per month; and

CF = conversion factor (2,000 lbs/ton).

g) Miscellaneous Requirements

(1) None.

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

Operations, Property and/or Equipment Description:

Fugitive emissions from process equipment: 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 0.22 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 paragraphs d)(3) and d)(4) 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.
- (5) 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.
- (6) 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) For each inspection that occurred during the year, the permittee shall submit the following information annually from data collected by the ancillary equipment leak detection and repair program:
- 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 0.22 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.

Component Type (# of components) x emission factor x % VOC* = lb/hr

Gas/Vapor Service

Number of connectors (3,689) x 0.000441 lb/hr x % VOC = lb/hr
 Number of valves (919) x 0.00992 lb/hr x % VOC = lb/hr
 Number of flanges (1271) x 0.00086 lb/hr x % VOC = lb/hr
 Number of compressor seals (30) x 0.0194 lb/hr x % VOC = lb/hr
 Number of relief valves (67) x 0.0194 lb/hr x % VOC = lb/hr
 *where: % VOC = 2.00 per company's analysis

Light Oil Service

Number of connectors (961) x 0.000243 lb/hr x % VOC = lb/hr
 Number of valves (156) x 0.000216 lb/hr x % VOC = lb/hr
 Number of flanges (39) x 0.000006 lb/hr x % VOC = lb/hr



Number of other components (4) x 0.00055 lb/hr x % VOC = lb/hr
*where: % VOC = 100 per company's analysis

Heavy Liquid

Number of connectors (1,055) x 0.0000165 lb/hr x % VOC = lb/hr
Number of valves (278) x 0.0000185 lb/hr x % VOC = lb/hr
Number of pump seals (30) x 0.00113 lb/hr x % VOC = lb/hr
Number of flanges (88) 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) None.

6. 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.