



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

11/5/2015

Mr. Chris Ackers  
Eureka Hunter Pipeline - Zinc Compressor Station  
27710 State Route 7  
Marietta, OH 45750

Certified Mail

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	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: 0656035009  
Permit Number: P0119755  
Permit Type: Initial Installation  
County: Monroe

Dear Permit Holder:

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

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

**How to appeal this permit**

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

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

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

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

## **How to give us feedback on your permitting experience**

Please complete a survey at [www.epa.ohio.gov/survey.aspx](http://www.epa.ohio.gov/survey.aspx) and give us feedback on your permitting experience. We value your opinion.

## **How to get an electronic copy of your permit**

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

If you have any questions, please contact Ohio EPA DAPC, 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



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
Eureka Hunter Pipeline - Zinc Compressor Station**

Facility ID:	0656035009
Permit Number:	P0119755
Permit Type:	Initial Installation
Issued:	11/5/2015
Effective:	11/5/2015
Expiration:	4/28/2025





**Division of Air Pollution Control**  
**Permit-to-Install and Operate**  
for  
Eureka Hunter Pipeline - Zinc Compressor Station

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**Final Permit-to-Install and Operate**  
Eureka Hunter Pipeline - Zinc Compressor Station  
**Permit Number:** P0119755  
**Facility ID:** 0656035009  
**Effective Date:** 11/5/2015

## Authorization

Facility ID: 0656035009  
Application Number(s): A0054171, A0054613  
Permit Number: P0119755  
Permit Description: Initial installation permit for the addition of three compressors at existing site, removing two 1,380 hp engines and replacing with larger 2,730 hp engines and adding a 4,735 hp engine.  
Permit Type: Initial Installation  
Permit Fee: \$1,200.00  
Issue Date: 11/5/2015  
Effective Date: 11/5/2015  
Expiration Date: 4/28/2025  
Permit Evaluation Report (PER) Annual Date: July 1 - June 30, Due Aug 15

This document constitutes issuance to:

Eureka Hunter Pipeline - Zinc Compressor Station  
51213 Krebs Hill Rd  
Clarington, OH 43915

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: P0119755

Permit Description: Initial installation permit for the addition of three compressors at existing site, removing two 1,380 hp engines and replacing with larger 2,730 hp engines and adding a 4,735 hp engine.

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

**Emissions Unit ID:** P008  
 Company Equipment ID: P006  
 Superseded Permit Number:  
 General Permit Category and Type: Not Applicable

**Group Name: Compressor Engines**

<b>Emissions Unit ID:</b>	<b>P006</b>
Company Equipment ID:	P006
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P007</b>
Company Equipment ID:	P007
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install and Operate**  
Eureka Hunter Pipeline - Zinc Compressor Station  
**Permit Number:** P0119755  
**Facility ID:** 0656035009  
**Effective Date:** 11/5/2015

## **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**  
Eureka Hunter Pipeline - Zinc Compressor Station  
**Permit Number:** P0119755  
**Facility ID:** 0656035009  
**Effective Date:** 11/5/2015

## **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, NESHAP for Stationary Reciprocating Internal Combustion Engines at Area Sources. Although Ohio EPA has determined that this GACT applies, at this time Ohio EPA does not have the authority to enforce this standard. Instead, US 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 US EPA. For more information on the area source rules, please refer to the following US 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 and OOOO (P006, P007, and P008). The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the e-CFR website <http://ecfr.gpoaccess.gov> or by contacting the appropriate Ohio EPA District office or local air agency.
4. The PTIO application for this/these emissions units, P003-P008, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
  - a) the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - (1) threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

(2) STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b) The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c) This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "24" hours per day and "7" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/24 \times 5/7 = 4 TLV/24 \times 7 = MAGLC$$

- d) The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: formaldehyde covered under the worst-case toxic modeled.

TLV (mg/m<sup>3</sup>): 0.7

Maximum Hourly Emission Rate (lbs/hr): 1.19

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 7.06

MAGLC (ug/m<sup>3</sup>): 8.8

The permittee, has demonstrated that emissions of formaldehyde, from emissions units P003-P008, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

5. Prior to making any physical changes to or changes in the method of operation of the emissions units, P003-P008, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the changes to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a) changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b) changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c) physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

6. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
  - a) a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b) the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
  - c) a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d) the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
7. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
8. The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.



**Final Permit-to-Install and Operate**  
Eureka Hunter Pipeline - Zinc Compressor Station  
**Permit Number:** P0119755  
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## **C. Emissions Unit Terms and Conditions**



**1. P008, 4,735 HP Engine**

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

Natural Gas Fueled Lean Burn 4-Stroke Caterpillar G3616 LE Compressor Engine controlled with catalyst, with 90.0% control efficiency for CO, 70.0% control efficiency for formaldehyde, 60.0% control efficiency for VOC, and 60.0% control efficiency for total HAPs.

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)	<p>Nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 1.91 tons per month averaged over a twelve-month, rolling period.</p> <p>Install an engine with a catalyst that shall have at least 90.0% control efficiency for carbon monoxide (CO) emissions.</p> <p>Install an engine with a catalyst that shall have at least 60.0% control efficiency for volatile organic compounds (VOC) emissions.</p>
b.	OAC rule 3745-31-05(E), effective 6/1/2008	Install and operate an engine with a catalyst with at least 90.0% control efficiency for CO emissions.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>CO emissions shall not exceed 12.53 tpy.</p> <p>Install and operate an engine with a catalyst that shall have at least 60.0% control efficiency for VOC emissions.</p> <p>VOC emissions shall not exceed 11.52 tpy.</p> <p>Install and operate an engine with a catalyst that shall have at least 70.0% control efficiency for formaldehyde emissions.</p> <p>Formaldehyde emissions shall not exceed 3.57 tpy.</p> <p>Install and operate an engine with a catalyst with at least 60.0% control efficiency for HAPs.</p> <p>Total HAPs emissions shall not exceed 4.71 tons per year.</p> <p>See c)(2) and c)(3) below.</p>
c.	<p>40 CFR Part 60, Subpart JJJJ (40 CFR 60. 4230 – 60.4248)</p> <p>[In accordance with 40 CFR Part 60.4230(a) and 40 CFR Part 60.4230(a)(4)(i), this emissions unit is a stationary spark ignition internal combustion engine commencing construction after June 12, 2006 and manufactured after July 1, 2010, and is subject to the emission limitations and control measures specified in this section.]</p>	<p>NO<sub>x</sub> emissions shall not exceed 1.0 g/hp-hr or 82 ppmvd at 15% O<sub>2</sub>.</p> <p>CO emissions shall not exceed 2.0 g/hp-hr or 270 ppmvd at 15% O<sub>2</sub>.</p> <p>VOC emissions shall not exceed 0.7 g/hp-hr or 60 ppmvd at 15% O<sub>2</sub>.</p> <p>[40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1]</p>
d.	<p>40 CFR Part 60, Subpart OOOO, (40 CFR 60. 5360 – 60.5430)</p> <p>[In accordance with 40 CFR Part 60.5365(c), this emissions unit is a reciprocating compressor located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment</p>	<p>See c)(4), d)(7) and e)(5).</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	and is subject to the maintenance, operational, monitoring, recordkeeping, and reporting measures specified in this section.]	
e.	40 CFR Part 60.1 – 19 (40 CFR 60.4246 and 60.5425)	Table 3 to Subpart JJJJ and OOOO of 40 CFR Part 60 – Applicability of General Provisions to Subpart JJJJ and OOOO shows which part of the General Provisions in 40 CFR Part 60.1 – 19 apply.
f.	OAC rule 3745-17-07(A)(1)	Visible PE from the stack serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by the rule.
g.	OAC rule 3745-17-11(B)(5)(b)	PE shall not exceed 0.062 lb/MMBtu actual heat input.
h.	OAC rule 3745-18-06(E)	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 pursuant to OAC rule 3745-18-06(A).
i.	OAC rule 3745-110-03(F)	This emission unit is subject but exempt from the requirement of OAC rule 3745-110-03 per OAC 3745-110-02(A)(2)(b).

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.
- (2) The permittee shall install and operate each engine with an catalyst for control of CO, VOC, and formaldehyde emissions and shall maintain the engine and catalyst in accordance with the manufacturer’s recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.
- (3) In the event the engine or catalyst is not operating in accordance with the manufacturer’s recommendations, instructions, or operating manual, with any modifications deemed necessary by the permittee, the engine shall be expeditiously repaired or otherwise returned to these documented operating conditions.
- (4) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart JJJJ and Subpart OOOO, including the following sections:

60.4234	Operate and maintain engine in compliance with emission standards over the life of the engine
60.4243(b)(2) and 60.4243(b)(2)(ii)	For non-certified engines maintain engine with good air pollution control practices
60.4243(e)	Use of propane for up to 100 hours per year during emergencies
60.4243(g)	Maintain and operate air to fuel ratio (AFR) with three-way catalyst/non-selective catalytic reduction
60.5385(a), 60.5415(c)(3)	Replace compressor rod packing either before the compressor has operated for 26,000 hours or prior to 36 months from the date of the most recent rod packing replacement (or initial startup for a new unit).

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, operating manuals for the engine and catalyst, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.
- (3) The permittee shall conduct periodic inspections of the engine and catalyst, to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency, and it shall be made available to the Ohio EPA upon request.
- (4) In addition to the recommended periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the engine and catalyst, while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer's recommendations.
- (5) The permittee shall document each inspection (periodic and annual) of the engine and catalyst, and shall maintain the following information:



- a. The date of the inspection;
- b. A description of each/any problem identified and the date it was corrected;
- c. A description of any maintenance and repairs performed; and
- d. The name of the person who performed the inspection.

These records shall be maintained at the facility for not less than five years from the date the inspection and any necessary maintenance or repairs were completed and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.

- (6) The permittee shall maintain records that document any time periods when the catalyst was not in service when the emissions unit(s) was/were in operation, as well as a record of all operations during which the catalyst was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request.
- (7) The permittee shall comply with the applicable monitoring and record keeping requirements of 40 CFR Part 60, Subparts A, JJJJ, and OOOO, including the following sections:

60.4243(b)(2)(ii), 60.4245(a)(1), 60.4245(a)(2) and 60.4245(a)(4)	Keep engine maintenance plan and records of conducted engine maintenance, and documentation that the engine meets the emissions standards
60.5410(c)(1) and (4), 60.5415(c)(1), 60.5385, 60.5420(c)(3) and 60.7(f)	Continuously monitor and maintain records of hours of operation or number of months, maintain rod packing replacements records and records of deviations of operating requirements.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal: or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.



- (4) The permittee shall submit deviation (excursion) reports that identify each occurrence that the permittee failed to complete required maintenance in this emissions unit per the engine or catalyst manufacturer's requirement. Each report shall be submitted within 30 days after the deviation occurs.
- (5) The permittee shall comply with the applicable reporting requirements required under 40 CFR Part 60, Subparts A, JJJJ and OOOO, including the following sections:

60.4245(c) and 60.7	Submit an initial notification (non-certified engines)
60.4245(d)	Submit performance test copies within 60 days after the test has been completed
60.5385, 60.5410(c)(3), 60.5415(c)(2), and 60.5420(b)	Submit annual reports within 90 days after the end of the initial compliance period and no later than the same date each subsequent year

f) Testing Requirements

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

a. Emissions Limitation:

NO<sub>x</sub> emissions shall not exceed 1.91 tons per month averaged over a twelve-month, rolling period.

Applicable Compliance Methods:

Compliance with the annual emission limitation is demonstrated by the following equation:

$$\left\{ Ef * HP * \frac{1}{453.50g} * \frac{8,760hrs}{yr} \right\} / (2,000lbs/ton) / \left( \frac{yr}{12 month} \right)$$

Where:

Ef= emission factor, 0.5 g/bhp-hr, specified in the manufacturer's engine specification sheet obtained from Caterpillar

HP = the power output rating of this unit, 4,735 bhp

If required, compliance with NO<sub>x</sub> limitation shall be demonstrated based upon the emission testing requirements specified in f)(2).



**Final Permit-to-Install and Operate**  
Eureka Hunter Pipeline - Zinc Compressor Station  
**Permit Number:** P0119755  
**Facility ID:** 0656035009  
**Effective Date:** 11/5/2015



b. Emissions Limitations:

Install an engine with a catalyst that shall have at least 90.0% control efficiency for CO emissions.

Install and operate an engine with a catalyst with at least 90.0% control efficiency for CO emissions.

CO emissions shall not exceed 12.53 tpy.

Applicable Compliance Methods:

Initial compliance with the annual emission limitation is demonstrated by the following equation:

$$\{Ef * HP * \frac{1}{\frac{453.50g}{lb}} * \frac{8,760hrs}{yr} * (1 - CE)\} / (2,000lbs/ton)$$

Where:

Ef= emission factor, 2.74 g/bhp-hr, specified in the manufacturer's engine specification sheet obtained from Caterpillar,

HP = the power output rating of this unit, 4,735 bhp

CE = control efficiency, 90.0%

Compliance with CO limitation shall be demonstrated based upon the emission testing requirements specified in f)(2).

c. Emissions Limitations:

Install an engine and a catalyst that shall have at least 60.0% control efficiency for VOC emissions.

Install and operate an engine with a catalyst that shall have at least 60.0% control efficiency for VOC emissions.

VOC emissions shall not exceed 11.52 tpy.

Applicable Compliance Methods:

Initial compliance with the VOC annual emission limitation is demonstrated by the following equation:

$$\{Ef * HP * \frac{1}{\frac{453.50g}{lb}} * \frac{8,760hrs}{yr} * (1 - CE)\} / (2,000lbs/ton)$$

Where:

Ef= emission factor, 0.63 g/bhp-hr, specified in the manufacturer's engine specification sheet obtained from Caterpillar,

HP = the power output rating of this unit, 4,735 bhp

CE = control efficiency, 60.0%

Compliance with VOC limitation shall be demonstrated based upon the emission testing requirements specified in f)(2).

d. Emissions Limitations:

Install and operate the catalyst with at least 70.0% control efficiency for formaldehyde emissions.

Formaldehyde emissions shall not exceed 3.57 tpy.

Applicable Compliance Methods:

Initial compliance with the annual emission limitation is demonstrated by the following equation:

$$\{Ef * HP * \frac{1}{\frac{453.50g}{lb}} * \frac{8,760hrs}{yr} * (1 - CE)\} / (2,000lbs/ton)$$

Where:

Ef= emission factor, 0.26 g/bhp-hr, specified in the manufacturer's engine specification sheet obtained from Caterpillar,

HP = the power output rating of this unit, 4,735 bhp

CE = control efficiency, 70.0%

Compliance with formaldehyde limitation shall be demonstrated based upon the emission testing requirements specified in f)(2).

e. Emissions Limitations:

NO<sub>x</sub> emissions shall not exceed 1.0 g/hp-hr or 82 ppmvd at 15% O<sub>2</sub>.

Applicable Compliance Methods:

Compliance with NO<sub>x</sub> limitation shall be demonstrated based upon the emission testing requirements specified in f)(2).

f. Emissions Limitations:

CO emissions shall not exceed 2.0 g/hp-hr or 270 ppmvd at 15% O<sub>2</sub>



Applicable Compliance Methods:

Compliance with CO limitation shall be demonstrated based upon the emission testing requirements specified in f)(2).

g. Emissions Limitations:

VOC emissions shall not exceed 0.7 g/hp-hr or 60 ppmvd at 15% O<sub>2</sub>.

Applicable Compliance Methods:

Compliance with VOC limitation shall be demonstrated based upon the emission testing requirements specified in f)(2).

h. Emissions Limitations:

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

Applicable Compliance Method:

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

i. Emissions Limitations:

PE shall not exceed 0.062 lb/MMBtu of actual heat input.

Applicable Compliance Method:

Compliance is demonstrated by the applicant's application listing the emission factor for this engine as 0.00999 lb/MMBtu, which is less than the emission limitation.

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

(2) Pursuant to 40 CFR 60.4243(b)(2)(ii), OAC rule 3745-31-05(A)(3), OAC rule 3745-31-05(E), ORC 3704.03(T), and Table 1 of 40 CFR Part 60 Subpart JJJJ, the permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the procedures specified in 40 CFR Part 60, Appendix A, 40 CFR 60.8, 40 CFR 60.4244, 40 CFR Part 60, Subpart JJJJ, Table 2, and the following requirements:

a. An initial performance test shall be performed within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit. Subsequent performance tests shall be performed every 8,760 hours or three years whichever comes first.



- b. The emission testing shall be conducted to demonstrate compliance with the mass emissions limitations in b)(1)a. through b)(1)g. for VOC (as NMNEHC), NO<sub>x</sub> CO, and formaldehyde.
  - c. The following test methods shall be employed to demonstrate compliance with the allowable NO<sub>x</sub>, CO, VOC, and formaldehyde limits in b)(1)a.:
    - Methods 1-4 and 7E of CFR Part 60, Appendix A for NO<sub>x</sub>;
    - Methods 1-4 and 10 of 40 CFR Part 60, Appendix A for CO; and
    - Methods 1-4, 25A and Method 18 of 40 CFR Part 60, or Method 320 of 40 CFR Part 63, Appendix A for VOC (as NMNEHC); and
    - Methods 320 or 323 of 40 CFR Part 63, Appendix A for formaldehyde.
  - d. If the stationary internal combustion engine is modified or reconstructed (as defined in 40 CFR 0), the permittee shall conduct a subsequent performance test.
  - e. Each performance test 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 40 CFR Part 60, Subpart JJJJ.
  - f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office's refusal to accept the results of the emission test(s).
  - g. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
  - h. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office within 60 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.
- g) Miscellaneous Requirements
- (1) None.

**2. Emissions Unit Group – 2,370 HP Compressor Engines: P006,P007**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
P006	Natural Gas Fueled Lean Burn 4-Stroke Caterpillar G3608TALE Compressor Engine, controlled with catalyst, 90.0% control efficiency for CO, 93.0% control efficiency for formaldehyde, 75.0% control efficiency for VOC.
P007	Natural Gas Fueled Lean Burn 4-Stroke Caterpillar G3608TALE Compressor Engine, controlled with catalyst, 90.0% control efficiency for CO, 93.0% control efficiency for formaldehyde, 75.0% control efficiency for VOC.

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.

	<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
a.	OAC rule 3745-31-05(A)(3)	Install an engine that is designed to meet of 0.5 g nitrogen oxide (NO <sub>x</sub> )/bhp-hr.
b.	OAC rule 3745-31-05(A)(3), as effective 6/30/2008	Install an engine with a catalyst that shall have at least 90.0% control efficiency for carbon monoxide (CO) emissions.  Install an engine with a catalyst that shall have at least 75.0% control efficiency for volatile organic compounds (VOC) emissions.  See b)(2)a. below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 6/30/2008	<p>The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC and CO emissions from this air contaminant source since the calculated annual emission rate is less than 10 tons/yr taking into account the voluntary restriction from OAC rule 3745-31-05(E).</p> <p>See b)(2)b. below.</p>
d.	OAC rule 3745-31-05(E), as effective 6/30/2008	<p>Install and operate an engine with a catalyst with at least 90.0% control efficiency for CO emissions.</p> <p>CO emissions shall not exceed 6.27 tons per year.</p> <p>Install and operate an engine with a catalyst with at least 75.0% control efficiency for VOC emissions.</p> <p>VOC emissions shall not exceed 3.60 tons per year.</p> <p>Install and operate an engine with a catalyst with at least 93.0% control efficiency for formaldehyde emissions.</p> <p>Formaldehyde emissions shall not exceed 0.42 tons per year.</p> <p>Install and operate an engine with a catalyst with at least 75.0% control efficiency for total hazardous air pollutants (HAPs).</p> <p>Total HAPs emissions shall not exceed 0.42 tons per year.</p> <p>See c)(2) and c)(3) below.</p>
e.	<p>40 CFR Part 60, Subpart JJJJ (40 CFR 60.4230 – 60.4248)</p> <p>[In accordance with 40 CFR 60.4230(a), Table 1, and 40 CFR 60.4230(a)(4)(i), this emissions unit is a stationary spark ignition internal</p>	<p>NO<sub>x</sub> emissions shall not exceed 1.0 g/hp-hr. or 82 ppmvd at 15% O<sub>2</sub>.</p> <p>CO emissions shall not exceed 2.0 g/hp-hr or 270 ppmvd at 15% O<sub>2</sub>.</p> <p>VOC emissions shall not exceed 0.7</p>

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	combustion engine commencing construction and manufactured after July 1, 2010, and is subject to the emission limitations and control measures specified in this section.]	g/hp-hr or 60 ppmvd at 15% O <sub>2</sub> .  [40 CFR 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1]
f.	40 CFR Part 60, Subpart OOOO, (40 CFR 60. 5360 – 60.5430)  [In accordance with 40 CFR Part 60.5365(c) this emissions unit is a reciprocating compressor engine located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment subject to the maintenance, operational, monitoring, recordkeeping, and reporting measures specified in this section.]	See c)(4), d)(7) and e)(5).
g.	40 CFR Part 60.1 – 19 (40 CFR 60.4246 and 60.5425)	Table 3 to Subpart JJJJ and OOOO of 40 CFR Part 60 – Applicability of General Provisions to Subpart JJJJ and OOOO shows which part of the General Provisions in 40 CFR Part 60.1 – 19 apply.
h.	OAC rule 3745-17-07(A)(1)	Visible PE from the stack serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by the rule.
i.	OAC rule 3745-17-11(B)(5)(b)	PE shall not exceed 0.062 lb/MMBtu actual heat input.
j.	OAC rule 3745-18-06(E)	This emissions unit is exempt from the requirements of OAC rule 3745-18-06 pursuant to OAC rule 3745-18-06(A).
k.	OAC rule 3745-110-03(F)	This emission unit is subject but exempt from the requirement of OAC rule 3745-110-03 per OAC 3745-110-02(A)(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) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).



b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio State Implementation Plan SIP.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.
- (2) The permittee shall install and operate the engines with a catalyst for control of CO, VOC, formaldehyde, and total HAPs emissions and shall maintain the engine and catalyst in accordance with the manufacturer’s recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.
- (3) In the event the engine or catalyst is not operating in accordance with the manufacturer’s recommendations, instructions, or operating manual, with any modifications deemed necessary by the permittee, the engine or catalyst shall be expeditiously repaired or otherwise returned to these documented operating conditions.
- (4) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subparts JJJJ and OOOO, including the following sections:

60.4234	Operate and maintain engine in compliance with emission standards over the life of the engine
60.4243(b)(2) and 60.4243(b)(2)(ii)	For non-certified engines, maintain and operate engine with good air pollution control practices
60.4243(e)	Use of propane for up to 100 hours per year during emergencies
60.4243(g)	Maintain and operate air to fuel ratio (AFR) with three-way catalyst/non-selective catalytic reduction.
60.5385(a)(1) and (2), and 60.5415(c)(3)	Replace rod packing either before the total hours of operation reaches 26,000 hours or the most recent rod packing replacement reaches 36 months

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall maintain documentation of the manufacturer’s recommendations, instructions, operating manuals for the engine and catalytic convertor, along with

documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.

- (3) The permittee shall conduct periodic inspections of the engine and catalyst to determine whether they are operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency, and it shall be made available to the Ohio EPA upon request.
- (4) In addition to the recommended periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the engine and catalyst while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer's recommendations.
- (5) The permittee shall document each inspection (periodic and annual) of the engine and catalyst and shall maintain the following information:
  - a. The date of the inspection;
  - b. A description of each/any problem identified and the date it was corrected;
  - c. A description of any maintenance and repairs performed; and
  - d. The name of the person who performed the inspection.

These records shall be maintained at the facility for not less than five years from the date the inspection and any necessary maintenance or repairs were completed and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.

- (6) The permittee shall maintain records that document any time periods when the catalyst was not in service when the emissions unit(s) was/were in operation, as well as a record of all operations during which the engine or catalyst was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request.
- (7) The permittee shall comply with the applicable monitoring and record keeping requirements of 40 CFR Part 60, Subparts A, JJJJ and OOOO, including the following sections:

60.4243(b)(2)(ii) and 60.4245(a)(i)	Keep maintenance plan and records of conducted maintenance, and all notifications, and documentation that the engine meets the emissions standards
60.5410(c)(1) and (4), 60.5415(c)(1), 60.5385, 60.5420(c)(3) and 60.7(f)	Continuously monitor and maintain records of hours of operation or number of months,



	maintain rod packing replacements records and records of deviations of operating requirements.
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e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal: or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (4) The permittee shall submit deviation (excursion) reports that identify each occurrence that the permittee failed to complete required maintenance of this emissions unit per the engine or catalyst manufacturer's requirement. Each report shall be submitted within 30 days after the deviation occurs.
- (5) The permittee shall comply with the applicable reporting requirements required under 40 CFR Part 60, Subparts A, JJJJ and OOOO, including the following sections:

60.7 and 60.4245(c)	Submit an initial notification (non-certified engines)
60.4245(d)	Submit performance test copies within 60 days after the test has been completed
60.5385, 60.5410(c)(3), 60.5415(c)(2), and 60.5420(b)	Submit annual reports within 90 days after the end of the initial compliance period and no later than the same date each subsequent year

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emissions Limitation:  
  
Install an engine that is designed to meet of 0.5 g NO<sub>x</sub>/bhp-hr.



Applicable Compliance Method:

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

b. Emissions Limitations:

Install an engine with a catalyst that shall have at least 90.0% control efficiency for CO emissions.

Install and operate an engine with a catalyst with at least 90.0% control efficiency for CO emissions.

CO emissions shall not exceed 6.27 tons per year.

Applicable Compliance Method:

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

Compliance with the annual emission limitation is demonstrated by the following equation:

$$\{Ef * HP * \frac{1}{453.50g} * \frac{8,760hrs}{yr} * (1 - CE)\} / (2,000lbs/ton)$$

Where:

- Ef= emission factor, 2.74 g/bhp-hr, specified in the manufacturer's engine specification sheet obtained from Caterpillar,
- HP = the power output rating of this unit, 2,370 bhp
- CE = control efficiency, 90.0%

c. Emissions Limitations:

Install an engine with a catalyst that shall have at least 75.0% control efficiency for VOC emissions

Install and operate an engine with a catalyst with at least 75.0% control efficiency for VOC emissions.

VOC emissions shall not exceed 3.60 tpy.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emissions testing requirements specified in f)(2).

Initial compliance with the annual emission limitation is demonstrated by the following equation:



$$\{Ef * HP * \frac{1}{\frac{453.50g}{lb}} * \frac{8,760hrs}{yr} * (1 - CE)\} / (2,000lbs/ton)$$

Where:

- Ef= emission factor, 0.63 g/bhp-hr, specified in the manufacturer's engine specification sheet obtained from Caterpillar,
- HP = the power output rating of this unit, 2,370 bhp
- CE = control efficiency, 75.0%

d. Emissions Limitations:

Install and operate an engine with a catalyst with at least 93.0% control efficiency for formaldehyde emissions.

Formaldehyde emissions shall not exceed 0.42 tons per year.

Applicable Compliance Method:

Compliance with the g/hp-hr shall be demonstrated based upon the emissions testing requirements specified in f)(2).

Initial compliance with the annual emission limitation is demonstrated by the following equation:

$$\{Ef * HP * \frac{1}{\frac{453.50g}{lb}} * \frac{8,760hrs}{yr} * (1 - CE)\} / (2,000lbs/ton)$$

Where:

- Ef= emission factor, 0.26 g/bhp-hr, specified in the manufacturer's engine specification sheet obtained from Caterpillar,
- HP = the power output rating of this unit, 2,370 bhp
- CE = control efficiency, 93.0%

e. Emissions Limitations:

Install and operate an engine with a catalyst with at least 75.0% control efficiency for total hazardous air pollutants (HAPs).

Total HAPs emissions shall not exceed 0.42 tons per year.

Applicable Compliance Method:

Initial compliance with the annual emission limitation is demonstrated by the following equation:

$$\sum_{total\ HAPs} \{Ef * HP * \frac{1}{\frac{453.50g}{lb}} * \frac{8,760hrs}{yr} * (1 - CE)\} / (2,000lbs/ton)$$

Where:

Ef= emission factor, lb/MMBtu, specified in the applicants calculations  
HP = the power output rating of this unit, 2,370 bhp  
CE = control efficiency, 75%

f. Emissions Limitation:

NO<sub>x</sub> emissions shall not exceed 1.0 g/hp-hr or 82 ppmvd at 15% O<sub>2</sub>.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emissions testing requirements specified in f)(2).

g. Emissions Limitation:

CO emissions shall not exceed 2.0 g/hp-hr or 270 ppmvd at 15% O<sub>2</sub>.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emissions testing requirements specified in f)(2).

h. Emissions Limitation:

VOC emissions shall not exceed 0.7 g/hp-hr or 60 ppmvd at 15% O<sub>2</sub>.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emissions testing requirements specified in f)(2).

i. Emission Limitation:

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

Applicable Compliance Method:

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

j. Emissions Limitation:

PE shall not exceed 0.062 lb/MMBtu actual heat input.

Applicable Compliance Method:

Compliance is demonstrated by the applicant's application listing the emission factor for this engine as 0.00999 lb/MMBtu, which is less than the emission limitation.

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

(2) Pursuant to 40 CFR 60.4243(b)(2)(ii), OAC rule 3745-31-05(A)(3), OAC rule 3745-31-05(E), ORC 3704.03(T), and Table 1 of 40 CFR Part 60 Subpart JJJJ, the permittee shall conduct, or have conducted, emissions testing for this emissions unit in accordance with the procedures specified in 40 CFR Part 60, Appendix A, 40 CFR 60.8, 40 CFR 60.4244, 40 CFR Part 60, Subpart JJJJ, Table 2, and the following requirements:

a. An initial performance test shall be performed within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit. Subsequent performance tests shall be performed every 8,760 hours or three years whichever comes first.

b. The emission testing shall be conducted to demonstrate compliance with the mass emissions limitations in b)(1)a. through b)(1)g. for VOC, NO<sub>x</sub> CO, and formaldehyde.

c. The following test methods shall be employed to demonstrate compliance with the allowable NO<sub>x</sub> emission rate, the emissions limitations and design standards for CO, VOC, and formaldehyde limits in b)(1)a.:

Methods 1-4 and 7E of CFR Part 60, Appendix A for NO<sub>x</sub>;

Methods 1-4 and 10 of 40 CFR Part 60, Appendix A for CO; and

Methods 1-4, 25A and 18 of 40 CFR Part 60, Appendix A for VOC; and

Methods 320 or 323 of 40 CFR Part 63, Appendix A.

d. If the stationary internal combustion engine is rebuilt or undergoes major repair or maintenance, the permittee shall conduct a subsequent performance test.

e. Each performance test 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 40 CFR Part 60, Subpart JJJJ.

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s)



of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office's refusal to accept the results of the emission test(s).

- g. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- h. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.

g) Miscellaneous Requirements

- (1) None.