



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

9/27/2013

Certified Mail

Kristin Ikard
Archer Compressor Facility
P.O. Box 54368
Oklahoma City, OK 73154-1368

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
Yes	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
Yes	MODELING SUBMITTED
Yes	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0634005040
Permit Number: P0113393
Permit Type: Initial Installation
County: Harrison

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. 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 PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

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

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

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

If you have any questions, please contact Ohio EPA DAPC, Southeast District Office at (740)3858501 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
Ohio EPA-SEDO; Pennsylvania; West Virginia



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
Archer Compressor Facility**

Facility ID:	0634005040
Permit Number:	P0113393
Permit Type:	Initial Installation
Issued:	9/27/2013
Effective:	9/27/2013



Division of Air Pollution Control
Permit-to-Install
for
Archer Compressor Facility

Table of Contents

Authorization 1

A. Standard Terms and Conditions 4

 1. Federally Enforceable Standard Terms and Conditions 5

 2. Severability Clause 5

 3. General Requirements 5

 4. Monitoring and Related Record Keeping and Reporting Requirements 6

 5. Scheduled Maintenance/Malfunction Reporting 7

 6. Compliance Requirements 7

 7. Best Available Technology 8

 8. Air Pollution Nuisance 8

 9. Reporting Requirements 8

 10. Applicability 9

 11. Construction of New Sources(s) and Authorization to Install 9

 12. Permit-To-Operate Application 10

 13. Construction Compliance Certification 10

 14. Public Disclosure 10

 15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations 11

 16. Fees 11

 17. Permit Transfers 11

 18. Risk Management Plans 11

 19. Title IV Provisions 11

B. Facility-Wide Terms and Conditions 12

C. Emissions Unit Terms and Conditions 15

 1. F001, Unpaved roadways and parking areas 16

 2. J001, condensate and produced water truck loading 22

 3. Emissions Unit Group - 1775 HP (13.40 MMBtu) NG Compressors : P001,P002,P003,P004,P005,P006,P007,P008, 27

 4. Emissions Unit Group -4.41 MMBtu(605HP) NG Generator: P009,P010, 37

 5. P014, Standard flare #101 (37.77 MMBtu/hr) to control flash tank off-gases 45

 6. P015, Enclosed flare #102 (2.19 MMBtu/hr) to control non-condensable still vent vapors 49



7. P016, Standard flare #103 – control of emissions from condensate and processed water tank working, breathing, flashing loss and control of emissions from truck loading of condensate and processed water	54
8. P017, Equipment maintenance blowdown emissions	58
9. P801, Equipment leaks	61
10. T001, Condensate and produced water storage tanks	65



Final Permit-to-Install
Archer Compressor Facility
Permit Number: P0113393
Facility ID: 0634005040
Effective Date: 9/27/2013

Authorization

Facility ID: 0634005040
Facility Description: Natural Gas Production and Compression
Application Number(s): A0047058, A0048365, A0048589, A0048901
Permit Number: P0113393
Permit Description: 150 MMscfd NG Compressor Station including storage tanks, loading rack, engines, and flares.
Permit Type: Initial Installation
Permit Fee: \$3,400.00
Issue Date: 9/27/2013
Effective Date: 9/27/2013

This document constitutes issuance to:

Archer Compressor Facility
County Highway 45
Cadiz, OH 43907

of a Permit-to-Install 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 a Permit-to-Install for the 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 emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

A handwritten signature in black ink, appearing to read "Scott J. Nally".

Scott J. Nally
Director



Authorization (continued)

Permit Number: P0113393

Permit Description: 150 MMscfd NG Compressor Station including storage tanks, loading rack, engines, and flares.

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

Emissions Unit ID:	F001
Company Equipment ID:	UPR-101
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	J001
Company Equipment ID:	TL-101
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P014
Company Equipment ID:	FLARE-101
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P015
Company Equipment ID:	FLARE-102
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P016
Company Equipment ID:	FLARE-103
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P017
Company Equipment ID:	BD-101
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P801
Company Equipment ID:	FUG-101
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	T001
Company Equipment ID:	T-101
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: 1775 HP (13.40 MMBtu) NG Compres

Emissions Unit ID:	P001
Company Equipment ID:	C-101
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Emissions Unit ID:	P002
Company Equipment ID:	C-102
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P003
Company Equipment ID:	C-103
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P004
Company Equipment ID:	C-104
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P005
Company Equipment ID:	C-105
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P006
Company Equipment ID:	C-106
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P007
Company Equipment ID:	C-107
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P008
Company Equipment ID:	C-108
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: 4.41 MMBtu(605HP) NG Emergency G

Emissions Unit ID:	P009
Company Equipment ID:	G-101
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P010
Company Equipment ID:	G-102
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Final Permit-to-Install
Archer Compressor Facility
Permit Number: P0113393
Facility ID: 0634005040
Effective Date: 9/27/2013

A. Standard Terms and Conditions



1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
- (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

- a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.



- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Southeast District Office.



- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Southeast District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Southeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Southeast District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.



- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Southeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Southeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have



been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Southeast District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., 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) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).



- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., 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). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.



15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.



Final Permit-to-Install
Archer Compressor Facility
Permit Number: P0113393
Facility ID: 0634005040
Effective Date: 9/27/2013

B. Facility-Wide Terms and Conditions



1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.
2. The dehydration units controlled by emissions units P014 and P015 located at this facility are subject to 40 CFR Part 63, Subpart HH, National Emission Standards for Hazardous Air Pollutants (NESHAP) From Oil and Natural Gas Production Facilities: P014 and P015. The dehydration units at this facility are exempt per 63.764(e)(ii) from the requirements of 63.764(d)(2) due to the actual average emission of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year, as determined by the procedures specified in 63.772(b)(2) of 40 CFR Part 63, Subpart HH.
3. The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the Ohio EPA Southeast District Office.
4. The Ohio EPA has determined that this facility may be subject to the requirements of an area source MACT/GACT rule that the Ohio EPA does not have the delegated authority to implement. Although Ohio EPA has determined that an area source MACT (also known as the GACT) may apply, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised that all requirements associated with these rules are in effect and are enforceable by U.S. EPA. For more information on the area source rules, please refer to the follow U.S. EPA website: <http://www.epa.gov/ttn/atw/area/arearules.html>.
5. 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 – P008, and P009-P010. 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.
6. The reciprocating compressors, storage vessels (T001), and pneumatic controllers (as defined in 60.5365 and 60.5430) located at this facility are subject to 40 CFR Part 60, Subpart OOOO, Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution. The complete New Source Performance Standards (NSPS) requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the Ohio EPA Southeast District Office.
7. Modeling to demonstrate compliance with, the “Toxic Air Contaminant Statute”, ORC 3704.03(F)(4)(b), was not necessary for this project because the combined emissions units’ (taking into account Ohio EPA’s Engineering Guide 69) maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified PT prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials or use of new materials that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.



Final Permit-to-Install
Archer Compressor Facility
Permit Number: P0113393
Facility ID: 0634005040
Effective Date: 9/27/2013

8. Air contaminant sources that qualify as de minimis under OAC rule 3745-15-05, or are exempt under OAC rule 3745-31-03(A)(1) or (4) are not subject to emission standards established within this permit. Although this permit does not apply to de minimis or exempt sources, emissions from de minimis or exempt sources must be included in the total potential to emit (PTE) calculations for this permit.



Final Permit-to-Install
Archer Compressor Facility
Permit Number: P0113393
Facility ID: 0634005040
Effective Date: 9/27/2013

C. Emissions Unit Terms and Conditions



1. F001, Unpaved roadways and parking areas

Operations, Property and/or Equipment Description:

Unpaved Roadways and parking areas with a maximum of 9,855 VMT/yr.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	<p>Fugitive particulate emissions (PE) shall not exceed 0.29 ton per year.</p> <p>There shall be no visible PE from unpaved roadways and parking areas except for a period of time not to exceed 3 minutes during any 60-minute observation period.</p> <p>The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible PE of fugitive dust.</p> <p>See b)(2)a. and b)(2)c. through b)(2)h. below.</p>
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b. below.

(2) Additional Terms and Conditions

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



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

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

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

- c. The permittee shall employ best available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to treat the unpaved roadways and parking areas by application of chemical stabilization/dust suppressants and/or watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- d. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for unpaved roadways and parking areas that are covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.
- e. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.
- f. Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.
- g. Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of paved surface due to application of certain types of dust suppressants, may be controlled with the control measure specified above for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emissions limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emissions limitation of no VEs except for one minute during any 60-minute period.



h. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform inspections of each of the roadway segments and parking areas in accordance with the following frequencies:

<u>unpaved roadways and parking areas</u>	<u>minimum inspection frequency</u>
Pad surface area	daily
Lease Road Distance	daily

(2) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

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

- a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
- b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
- c. the dates the control measures were implemented; and
- d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in Term d)(3)d. shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.



e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit deviation reports that identify any of the following occurrences:
 - a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
 - b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.
- (3) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of 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. Emissions Limitation:

PE shall not exceed 0.29 ton per year.

Applicable Compliance Method:

Compliance with fugitive PE limitations shall be determined by using the following emissions factor equations in Section 13.2.2, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 12/03) for unpaved roadways. Should further updates in AP-42 occur, the most current equations for unpaved roads shall be used. These emission limits were based on a maximum of 9,855 vehicle miles traveled per year, and 95 % control efficiency for PM.

$$EF = ((k*(s/12)^{a*(W/3)^b}))(365-p)/365)$$

Where for light vehicles:

EF = size-specific emission factor (lb/VMT)

s = 1.8% surface material silt content

W = 2 tons average vehicle weight (tons)

p = 140 day/yr with > 0.01 inch precipitation

VMT = 6,570 miles/yr

k = 4.9 (dimension less constant) particle size multiplier

a = 0.7 (dimension less constant)

b = 0.45 (dimension less constant)



Therefore, $EF = 0.67 \text{ lb particulate/VMT}$

Maximum travel = 6,570 VMT/year (as submitted in application)

$(6,570 \text{ VMT/yr})(0.67 \text{ lbs/VMT}) = 4,401.9 \text{ lbs of particulate/year}$

$(4,401.9 \text{ lbs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 2.20095 \text{ tons of particulate uncontrolled/year}$

Assume 95% control for roadway watering (Cleveland SIP study)

$(2.20095 \text{ tons/year}) (1-0.95) = 0.11 \text{ ton of particulate controlled/year}$

Where for heavy vehicles:

$EF = \text{size-specific emission factor (lb/VMT)}$

$s = 1.8\% \text{ surface material silt content}$

$W = 27.5 \text{ tons average vehicle weight (tons)}$

$p = 140 \text{ day/yr with } > 0.01 \text{ inch precipitation}$

$VMT = 3,285 \text{ miles/yr}$

$k = 4.9 \text{ (dimension less constant) particle size multiplier}$

$a = 0.7 \text{ (dimension less constant)}$

$b = 0.45 \text{ (dimension less constant)}$

Therefore, $EF = 2.17 \text{ lbs particulate/VMT}$

Maximum travel = 3,285 VMT/year (as submitted in application)

$(3,285 \text{ VMT/yr})(2.17 \text{ lbs/VMT}) = 7,128.45 \text{ lbs of particulate/year}$

$(7,128.45 \text{ lbs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 3.56 \text{ tons of particulate uncontrolled/year}$

Assume 95% control for roadway watering (Cleveland SIP study)

$(3.56 \text{ tons/year}) (1-0.95) = 0.18 \text{ ton of particulate controlled/year}$

Total = $0.11 \text{ ton/year} + 0.18 \text{ ton/year} = 0.29 \text{ ton of PE/year}$

b. Emissions Limitation:

There shall be no visible PE from unpaved roadways and parking areas except for a period of time not to exceed 3 minutes during any 60-minute observation period.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 22.



Final Permit-to-Install
Archer Compressor Facility
Permit Number: P0113393
Facility ID: 0634005040
Effective Date:9/27/2013

g) Miscellaneous Requirements

(1) None.



2. J001, condensate and produced water truck loading

Operations, Property and/or Equipment Description:

Condensate (maximum annual throughput of 7,665,000 gallons) and produced water (maximum annual throughput of 766,500 gallons) truck loading including one loading rack for condensate and one loading rack for produced water. All loading of trucks equipped with submerged fill and vented to standard flare #103 (P016) with a capture efficiency of 70% and a control/destruction efficiency of 98% for VOC emissions.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05 (A)(3), as effective 11/30/01	Fugitive volatile organic compound (VOC) emissions from condensate and produced water truck loading losses not captured and vented to the flare and VOC emissions captured and vented to the flare combined shall not exceed 7.18 tons per rolling, 12-month period. Use of submerged or bottom fill on all tanks. See b)(2)a.
b.	OAC Rule 3745-31-05 (C), as effective 12/01/06	See b)(2)b.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standard (NAAQS) pollutant(s) less



than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 these emissions limitations/control measures no longer apply.

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

PTI P0113393 for this air contaminant source takes into account the following voluntary restriction (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements for VOC under OAC rule 3745-31-05(A)(3):

- i. VOC emissions from the loading of trucks with condensate or produced water shall be vented to a flare with a minimum of 70% capture efficiency and 98% control efficiency.
- ii. Use of submerged or bottom fill on all tanks.
- iii. Fugitive volatile organic compound (VOC) emissions from condensate and produced water truck loading losses not captured and vented to the flare and VOC emissions captured and vented to the flare combined shall not exceed 7.18 tons per rolling, 12-month period.

c) **Operational Restrictions**

- (1) Emissions from the loading of trucks with condensate or produced water shall be vented to a flare with a minimum of 70% capture efficiency and 98% control efficiency for VOC. The flare shall be designed and operated as required in emissions unit P016.
- (2) All condensate and produced water loading lines shall be equipped with fittings which are vapor tight.
- (3) The delivery vessel hatches shall be closed at all times during the loading of the delivery vessel.
- (4) The permittee shall not permit condensate or produced water to be spilled, discarded in sewers, stored in open containers or handled in any other manner that would result in evaporation.

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

- (1) The permittee shall collect and record the following each month:
 - a. the amount of throughput of condensate, in gallons;
 - b. the amount of throughput of produced water, in gallons; and



c. the monthly VOC emissions as calculated in section f)(1)a., in tons.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

f) Testing Requirements

- (1) Compliance with the Emission 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:

Fugitive VOC emissions from condensate and produced water truck loading losses not captured and vented to the flare and VOC emissions captured and vented to the flare combined shall not exceed 7.18 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emissions limitation was determined based on the following calculation:

Condensate truck loading loss:

Truck loading emissions shall be based on multiplying a loading loss factor by the annual liquid throughput in gallons per year divided by 1,000.

The loading loss factor was derived using AP-42, Section 5.2, "Loading Loss Equation." The loading loss shall be determined by the following calculation:

Condensate loading loss = 12.46 SPM/T

Condensate loading loss = $12.46 \times 0.6 \times 6.7413 \text{ psia} \times 60 \text{ lb/lb mole} / 508.30^\circ\text{R}$
= 5.949 lbs/1,000 gal of liquid loaded

Annual emissions rate = condensate loading loss X condensate throughput
= $5.949 \text{ lb}/1,000\text{gal} \times 7,665 \text{ gal} = 45,599.09749 \text{ lbs/yr.}$

$45599.09749 \text{ lbs/yr}$ divided by 2,000 lbs = 22.79955 tons/year

$(22.79955 \text{ tons/year})(1-0.70) = 6.83986 \text{ tons of VOC/year (fugitive)}$

$(22.79955 \text{ tons/year})(0.70)(1-0.98) = 0.3191937 \text{ tons of VOC/year from flare stack}$

Total VOC emissions from condensate loading:



0.3191937 ton/year + 6.83986 tons/year = 7.16 tons of VOC/year

Where:

S = saturation factor, 0.6 for submerged loading (AP-42 Chapter 5.2-1)

P = vapor pressure of liquid loaded *

M = molecular weight of vapor *

T = temperature of bulk liquid *

0.70 = capture efficiency of system in decimal form*

0.98 = destruction/control efficiency of flare in decimal form*

* from permittee's application

Produced water truck loading:

Truck loading emissions shall be based on multiplying a loading loss factor by the annual liquid throughput in gallons per year divided by 1,000.

The loading loss factor was derived using AP-42, Section 5.2, "Loading Loss Equation." The loading loss shall be determined by the following calculation:

Produced water loading loss = 12.46 SPM/T

Produced water loading loss = $12.46 \times 0.6 \times 0.3166 \text{ psia} \times 37.0614 \text{ lb/lb mole} / 514.6^\circ\text{R}$

= 0.1705 lbs/1,000 gal of liquid loaded

Annual emissions rate = condensate loading loss X condensate

throughput = $0.1705 \text{ lb/1,000gal} \times 766.5 \text{ gal}^* = 130.68825 \text{ lbs/yr.}$

130.68825 lbs/yr divided by 2,000 lbs = 0.0653 tons/year

$(0.0653 \text{ tons/year})(1-0.70) = 0.019603238 \text{ tons of VOC/year (fugitive)}$

$(0.019603238 \text{ tons/year})(0.70)(1-0.98) = 0.000274445 \text{ tons of VOC/year from flare stack}$

Total VOC emissions from produced water loading:

$0.019603238 \text{ ton/year} + 0.000274445 \text{ tons/year} = 0.01988 \text{ tons of VOC/year}$

Where:

S = saturation factor, 0.60 for submerged loading (AP-42 Chapter 5.2-1)

P = vapor pressure of liquid loaded *

M = molecular weight of vapor *

T = temperature of bulk liquid *



0.70 = capture efficiency of system in decimal form*

0.98 = destruction/control efficiency of flare in decimal form*

* from permittee's application

Total Truck loading loss

Truck loading loss = Condensate loading + produced water loading

= 7.159 tons/yr + 0.01988 ton/yr = 7.18 tons/yr

g) Miscellaneous Requirements

(1) None.



3. Emissions Unit Group - 1775 HP (13.40 MMBtu) NG Compressors : P001,P002,P003,P004,P005,P006,P007,P008,

EU ID	Operations, Property and/or Equipment Description
P001	Compressor Engine #1 – 1,775 HP Caterpillar G3606 (4S-LB) - natural gas-fired four-cycle lean burn internal combustion engine equipped with an oxidation catalyst controlling CO & VOC emissions.
P002	Compressor Engine #2 – 1,775 HP Caterpillar G3606 (4S-LB) - natural gas-fired four-cycle lean burn internal combustion engine equipped with an oxidation catalyst controlling CO & VOC emissions.
P003	Compressor Engine #3 – 1,775 HP Caterpillar G3606 (4S-LB) - natural gas-fired four-cycle lean burn internal combustion engine equipped with an oxidation catalyst controlling CO & VOC emissions.
P004	Compressor Engine #4 – 1,775 HP Caterpillar G3606 (4S-LB) - natural gas-fired four-cycle lean burn internal combustion engine equipped with an oxidation catalyst controlling CO & VOC emissions.
P005	Compressor Engine #5 – 1,775 HP Caterpillar G3606 (4S-LB) - natural gas-fired four-cycle lean burn internal combustion engine equipped with an oxidation catalyst controlling CO & VOC emissions.
P006	Compressor Engine #6 – 1,775 HP Caterpillar G3606 (4S-LB) - natural gas-fired four-cycle lean burn internal combustion engine equipped with an oxidation catalyst controlling CO & VOC emissions.
P007	Compressor Engine #7 – 1,775 HP Caterpillar G3606 (4S-LB) - natural gas-fired four-cycle lean burn internal combustion engine equipped with an oxidation catalyst controlling CO & VOC emissions.
P008	Compressor Engine #8 – 1,775 HP Caterpillar G3606 (4S-LB) - natural gas-fired four-cycle lean burn internal combustion engine equipped with an oxidation catalyst controlling CO & VOC emissions.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Nitrogen oxide (NO _x) emissions from the stack serving this emissions unit shall not exceed 1.96 lbs/hr and 8.57 tons/year.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Carbon monoxide (CO) emissions from the stack serving this emissions unit shall not exceed 1.78 lbs/hr and 7.78 tons/year.</p> <p>Volatile Organic compounds (VOC) emissions from the stack serving this emissions unit shall not exceed 0.88 lbs/hr and 3.85 tons/year.</p> <p>Visible particulate emissions (PE) shall not exceed 10% opacity from the stack serving this emissions unit, as a 6-minute average.</p> <p>PE from the stack serving this emissions unit shall not exceed 0.13 lb/hr and 0.59 ton/ year.</p> <p>See b)(2)a. below.</p>
b.	OAC rule 3745-31-05(C), as effective 12/01/06	See b)(2)b. below.
c.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)c. below.
d.	OAC rule 3745-17-07(A)(1)	<p>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.</p> <p>This emission limitation is less stringent than the limitations listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.</p>
e.	OAC rule 3745-17-11(B)(5)(b)	<p>PE shall not exceed 0.062 pound/million Btu of actual heat input.</p> <p>This emission limitation is less stringent than the limitations listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR Part 60, Subpart JJJJ (40 CFR 60.4230 – 60.4248) [In accordance with 40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1, this emissions unit is a 1,775 hp, natural gas-fired, stationary spark internal combustion engine manufactured after July 1, 2010 that is located at a new natural gas compressor station and is subject to the emission limitations and control measures specified in this section.]	NOx emissions shall not exceed 1.00 g/hp-hr or 82 ppmvd at 15% oxygen (O ₂). CO emissions shall not exceed 2.00 g/hp-hr or 270 ppmvd at 15% O ₂ . VOC emissions shall not exceed 0.7 g/hp-hr or 60 ppmvd at 15% O ₂ . [40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1]
g.	40 CFR Part 60.1 – 19 (40 CFR 60.4246)	Table 3 to Subpart JJJJ of 40 CFR Part 60 – Applicability of General Provisions to Subpart JJJJ shows which part of the General Provisions in 40 CFR Part 60.1 – 19 apply.
h.	40 CFR Part 60, Subpart OOOO (60.5360-60.5430) [In accordance with 40 CFR 63.5365(c), this emissions unit is a reciprocating compressor subject to the Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution.]	The reciprocating compressor, constructed, modified, or reconstructed after 8/23/11 and located between the wellhead and the point of custody transfer to the natural transmission and storage segment, shall meet the requirements of 40 CFR Part 60, Subpart OOOO no later than 10/15/12 or upon initial startup following that date; and by tracking either the hours of operation or number of months between compressor rod packing replacement. See c)(3), d)(3) and e)(5).
i.	40 CFR Part 60, Subpart A (60.1-60.19)	General provisions may apply.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS



pollutant emissions less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revision to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, these emission limitations/control measures no longer apply.

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

This PTI P0113393 for this air contaminant source takes into account the following voluntary restriction (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3):

- i. The emissions from the engine are vented to an oxidation catalyst controlling CO and VOC emissions by a minimum of 85 and 75 percent respectively, at all times the emissions unit is in operation.
- ii. CO emissions shall not exceed 7.78 tons/year.
- iii. VOC emissions shall not exceed 3.85 tons/year.

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

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

- d. 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)	Compliance demonstration

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.
- (2) 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(b)	Maintenance requirements
60.4243(e)	Alternative fuel
60.4243(g)	AFR controllers

- (3) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart OOOO, including the following sections:

60.5385(a)-(d)	Standard for reciprocating compressor facilities
60.5410(c)(1)-(4)	Initial compliance demonstration
60.5415(c) & (h)	Continuous compliance demonstration

d) Monitoring and/or Recordkeeping Requirements

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

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

- (3) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart OOOO, including the following sections:

60.54209(c)(3)	Recordkeeping requirements
----------------	----------------------------



e) Reporting Requirements

- (1) 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.
- (2) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (3) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
- (4) The permittee shall submit notifications and reports to the Ohio EPA, Northeast District Office as required pursuant to 40 CFR Part 60, Subpart JJJJ, per the following sections:

60.4245(c)	Must submit an initial notification if not certified
60.4245(d)	Must submit performance test copies within 60 days after the test has been completed

- (5) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart OOOO, including the following sections:

60.5420(a), (b)(1) & (4)	Notifications and reports
--------------------------	---------------------------

f) Testing Requirements

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

a. Emissions Limitations:

NO_x emissions from the stack serving this emissions unit shall not exceed 1.96 lbs/hr and 8.57 tons/year.

Applicable Compliance Method:

Compliance with the hourly emission limitation above shall be determined by dividing 0.50 g/BHP-hr (the manufacturer supplied emission factor) by 454 g/lb, and then multiplying by 1,775 brake-horsepower (the maximum power output rating of this unit).



The TPY emission limitation was developed by multiplying the short-term allowable NO_x emission limitation (1.96 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

If required, compliance with the hourly emission limitation shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 7E.

b. Emissions Limitations:

CO emissions from the stack serving this emissions unit shall not exceed 1.78 lbs/hr and 7.78 tons/year.

Applicable Compliance Method:

Compliance with the hourly emission limitation above shall be determined by dividing 0.45 g/BHP-hr (the manufacturer supplied emission factor, including the 85% control efficiency of the catalytic converter) by 454 g/lb, and then multiplying by 1,775 brake-horsepower (the maximum power output rating of this unit).

The TPY emission limitation was developed by multiplying the short-term allowable CO emission limitation (1.78 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.

If required, compliance with the hourly emission limitation shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 10.

c. Emissions Limitations:

VOC emissions from the stack serving this emissions unit shall not exceed 0.68 lbs/hr and 2.97 tons/year.

Applicable Compliance Method:

Compliance with the hourly emission limitation above shall be determined by dividing 0.17 g/BHP-hr (the manufacturer supplied emission factor, including the 75% control efficiency of the catalytic converter) by 454 g/lb, and then multiplying by 1,775 brake-horsepower (the maximum power output rating of this unit).

The TPY emission limitation was developed by multiplying the short-term allowable VOC emission limitation (0.68 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance is demonstrated with the annual emission limitation.



If required, compliance with the hourly emission limitation shall be demonstrated in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 18, 25 or 25A.

d. Emissions Limitations:

PE from the stack serving this emissions unit shall not exceed 0.13 lb/hr and 0.59 ton/ year.

PE shall not exceed 0.062 pound/million Btu of actual heat input.

Applicable Compliance Method:

The short term emissions limit was derived from an emission factor of 0.00991 pound/million Btu, the emission factor is specified in AP-42 Table 3.2-3 (7/00), multiplied by 13.40MMBtu/hr rating of the unit.

The annual emission limitation was established by multiplying the short term emission limit by the maximum hours of operation, 8,760 hours/year, and dividing by 2,000 pounds/ton.

Compliance with the annual emission limitation may be assumed provided that the permittee demonstrates compliance with the short term emission rate.

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

e. Emissions Limitations:

Visible PE shall not exceed 10% opacity from the stack serving this emissions unit, as a 6-minute average.

Visible PE 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.

f. Emissions Limitations:

NO_x emissions shall not exceed 1.0 g/HP-hr and 82 ppmvd at 15% O₂.
CO emissions shall not exceed 2.0 g/HP-hr and 270 ppmvd at 15% O₂.
VOC emissions shall not exceed 0.7 g/HP-hr and 60 ppmvd at 15% O₂.



Applicable Compliance Method:

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

- (2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in 40 CFR 60.4233(e) and according to the requirements specified in 40 CFR 60.4244, as applicable. The permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practices for minimizing emissions. In addition, the permittee must conduct an initial performance test. Note: Archer Compressor Facility has chosen this compliance option in lieu of purchasing certified engines.

The permittee has chosen to demonstrate compliance with the emission standards specified in §60.4233(e) by performing a stack test, and therefore the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the procedures specified in 40 CFR 60.4244; 40 CFR Part 60, Subpart JJJJ Table 1; and the following requirements:

- a. An initial performance test shall be performed to demonstrate compliance with the mass emissions limitations in 40 CFR 60.4233(e) for VOC, NO_x, and CO, 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.
- b. If the stationary internal combustion engine is rebuilt, or undergoes major repair or maintenance the permittee shall conduct subsequent performance test.
- c. 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 1 of 40 CFR Part 60, Subpart JJJJ.
- 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. 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).
- e. 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.



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, 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) Any amendment to 40 CFR Part 60, Subpart OOOO shall supersede the compliance limitations and/or options contained in this permit.



4. Emissions Unit Group -4.41 MMBtu(605HP) NG Generator: P009,P010,

EU ID	Operations, Property and/or Equipment Description
P009	605 HP (4.41 MMBtu) natural gas fired 4 stroke - rich burn, NSCR Generator #1 equipped with a NSCR catalyst to control NOx, CO, VOC, and HAP emissions operating more than 500 hours per year.
P010	605 HP (4.41 MMBtu) natural gas fired 4 stroke - rich burn, NSCR Generator #2 equipped with a NSCR catalyst to control NOx, CO, VOC, and HAP emissions operating more than 500 hours per year.

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
- (1) 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)	Carbon monoxide (CO) emissions from the stack serving this emissions unit shall not exceed 12.55 tons per rolling, 12 month period.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	<p>Nitrogen oxide (NO_x) emissions from the stack serving this emissions unit shall not exceed 5.84 tons/year.</p> <p>Volatile Organic compounds (VOC) emissions from the stack serving this emissions unit shall not exceed 4.49 tons/year.</p> <p>Visible particulate emissions (PE) shall not exceed 10% opacity from the stack serving this emissions unit, as a 6-minute average.</p> <p>PE from the stack serving this emissions unit shall not exceed 0.04 lb/hour and 0.19 ton/ year.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart JJJJ.</p> <p>See b)(2)a. below.</p>
c.	OAC rule 3745-31-05(C), as effective 12/01/06	See b)(2)b. below.
d.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)c. below.
e.	<p>40 CFR Part 60, Subpart JJJJ (40 CFR 60.4230 – 60.4248)</p> <p>[In accordance with 40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1, this emissions unit is a 605 hp, natural gas-fired, stationary spark internal combustion engine manufactured after July 1, 2010 that is located at a new natural gas compressor station and is subject to the emission limitations and control measures specified in this section.]</p>	<p>NOx emissions shall not exceed 1.0 g/hp-hr or 82 ppmvd at 15% oxygen (O₂).</p> <p>CO emissions shall not exceed 2.0 g/hp-hr or 270 ppmvd at 15% O₂.</p> <p>VOC emissions shall not exceed 0.7 g/hp-hr or 60 ppmvd at 15% O₂.</p> <p>[40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1]</p>
f.	40 CFR Part 60.1 – 19 (40 CFR 60.4246)	Table 3 to Subpart JJJJ of 40 CFR Part 60 – Applicability of General Provisions to Subpart JJJJ shows which part of the General Provisions in 40 CFR Part 60.1 – 19 apply.
g.	OAC rule 3745-17-11(B)(5)(b)	<p>PE shall not exceed 0.062 pound/million Btu actual heat input.</p> <p>This emission limitation is less stringent than the limitations listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.</p>
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.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		This emission limitation is less stringent than the limitations listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.

(2) Additional Terms and Conditions

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

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

This PTIO P01133393 for this air contaminant source takes into account the following voluntary restriction (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3):

- i. The emissions from the engine are vented to an oxidation catalyst controlling NO_x, and VOC emissions by a minimum of 90 percent respectively, at all times the emissions unit is in operation.
- ii. NO_x emissions shall not exceed 5.84 tons/year.
- iii. VOC emissions shall not exceed 4.49 tons/year.

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

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

- d. 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)	Compliance demonstration

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.
- (2) 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(b)	Maintenance requirements
60.4243(e)	Alternative fuel
60.4243(g)	AFR controllers

d) Monitoring and/or Recordkeeping Requirements

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

60.4245(a), (c) and (d)	Notification, record keeping, and reporting requirements
-------------------------	--

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of 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 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)	Must submit an initial notification
60.4245(d)	Must submit performance test copies within 60 days after the test has been completed

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 method:

a. Emissions Limitation:

NO_x emissions shall not exceed 5.84 tons per year.

Applicable Compliance Methods:

The annual emissions rate was determined by multiplying 1.00 g/bhp-hr allowable by 605 bhp, (the power output rating of this unit) and dividing by 453.59 g/lb then multiplying by 8,760 hours/year, and dividing by 2,000 pounds/ton.

Compliance with the annual emissions limitation may be assumed provided that the permittee demonstrates compliance with the short term emission rate.

b. Emissions Limitation:

CO emissions shall not exceed 12.55 tons per rolling, 12-month period.

Applicable Compliance Methods:

The annual emissions rate was determined by multiplying 2.00 g/bhp-hr allowable by 650 bhp, (the power output rating of this unit) and dividing by 453.59 g/lb then multiplying by 8,760 hours/year, and dividing by 2,000 pounds/ton.

Compliance with the annual emissions limitation may be assumed provided that the permittee demonstrates compliance with the short term emission rate.

c. Emissions Limitation:

VOC emissions shall not exceed 4.49 ton/year.



Applicable Compliance Methods:

The annual emissions rate was determined by multiplying 0.70 g/bhp-hr allowable by 605 bhp, (the power output rating of this unit) and dividing by 453.59 g/lb then multiplying by 8,760 hours/year, and dividing by 2,000 pounds/ton.

Compliance with the annual emissions limitation may be assumed provided that the permittee demonstrates compliance with the short term emission rate.

d. Emissions Limitation:

Visible PE shall not exceed 10% opacity from the stack serving this emissions unit, as a 6-minute average.

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

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

e. Emissions Limitation:

PE emissions from the stack serving this emissions unit shall not exceed 0.04 lb/hr and 0.19 ton/year.

PE shall not exceed 0.062 pound/million Btu of actual heat input.

Applicable Compliance Method:

The short term emission limit was derived from an emission factor of 0.00991 pound/million Btu, the emission factor is specified in AP-42 Table 3.2-3 (7/00), multiplied by 4.41MMBtu/hr rating of the unit.

The annual emission limitation was established by multiplying the short term emission limit by the maximum hours of operation, 8,760 hours/year, and dividing by 2,000 pounds/ton.

Compliance with the annual emission limitation may be assumed provided that the permittee demonstrates compliance with the short term emission rate.

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



f. Emissions Limitations:

NO_x emissions shall not exceed 1.0 g/hp-hr or 82 ppmvd at 15% oxygen (O₂).

CO emissions shall not exceed 2.0 g/hp-hr or 270 ppmvd at 15% O₂.

VOC emissions shall not exceed 0.7 g/hp-hr or 60 ppmvd at 15% O₂.

Applicable Compliance Method:

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

- (2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in 40 CFR 60.4233(e) and according to the requirements specified in 40 CFR 60.4244, as applicable. The permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practices for minimizing emissions. In addition, the permittee must conduct an initial performance test. Note: Archer Compressor Facility has chosen this compliance option in lieu of purchasing certified engines.

The permittee has chosen to demonstrate compliance with the emission standards specified in §60.4233(e) by performing a stack test, and therefore the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the procedures specified in 40 CFR 60.4244; 40 CFR Part 60, Subpart JJJJ Table 1; and the following requirements:

- a. An initial performance test shall be performed to demonstrate compliance with the mass emissions limitations in 40 CFR 60.4233(e) for VOC, NO_x, and CO, 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.
- b. If the stationary internal combustion engine is rebuilt, or undergoes major repair or maintenance the permittee shall conduct subsequent performance test.
- c. 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 1 of 40 CFR Part 60, Subpart JJJJ.
- 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. 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).



- e. 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.
 - 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, 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.



5. P014, Standard flare #101 (37.77 MMBtu/hr) to control flash tank off-gases

Operations, Property and/or Equipment Description:

34,685scfh (37.77 MMBtu/hr) standard flare #101 to control flash tank off-gases associated with the dehydration process during the 5% annual downtime (438 hours/yr) of the flash gas compressor. Flare is permitted at worst case operation scenario of flare operating at 8,760 hours/year.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) 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>Total volatile organic compounds (VOC) emissions from the pilot gas and flared gas shall not exceed 37.59 tons per rolling, 12-month period.</p> <p>Total nitrogen oxide (NOx) emissions from the pilot gas and flared gas shall not exceed 11.30 tons per rolling, 12-month period.</p> <p>Total carbon monoxide (CO) emissions from the pilot gas and flared gas shall not exceed 61.23 tons per rolling, 12-month period.</p>

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) Any time the flash gas compressor is not operating, the flash tank-off gases shall be vented to a flare with 100% capture efficiency and 98% control efficiency of VOC emissions.



- (2) The permittee shall burn only natural gas in this emissions unit.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall record the following information each day for the flare and process operations:
 - a. The operating times for the flare and monitoring equipment.
 - (2) The permittee shall maintain records of each day a fuel other than natural gas is burned in this emissions unit.
- e) Reporting Requirements
- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
 - (2) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of 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.
- 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:

Total VOC emissions from the pilot gas and flared gas shall not exceed 37.58 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emissions limitation was established based on the following calculations:

Pilot gas emissions:

$$(5.5 \text{ lb/mmscf})(70 \text{ scf/hr})(1/1,000,000)(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 0.002 \text{ ton/year}$$

Flared gas emissions:

$$(8.58 \text{ lbs/hr})(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 37.58 \text{ tons/year}$$



Total VOC emissions:

$$0.002 \text{ ton/year} + 37.58 \text{ tons/year} = 37.59 \text{ tons/year}$$

Where:

5.5 lb/mmscf = emission factor from AP-42 Table 1.4-1 (7/98)

70 scf/hr = as submitted in application

8.58 lbs/hr = VOC emissions estimated as submitted in application, based on a 98% control efficiency.

b. Emissions Limitation:

Total NOx emissions from the pilot gas and flared gas shall not exceed 11.30 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emissions limitation was established based on the following calculations:

Pilot gas emissions:

$$(100 \text{ lb/mmscf})(70 \text{ scf/hr})(1/1,000,000)(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 0.031 \text{ ton/year}$$

Flared gas emissions:

$$(0.068 \text{ lb/mmBtu})(37.77 \text{ mmBtu/hr})(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 11.25 \text{ tons/year}$$

Total NOx emissions:

$$0.031 \text{ ton/year} + 11.25 \text{ tons/year} = 11.28 \text{ tons/year}$$

Where:

100 lb/mmscf = emission factor from AP-42, Table 1.4-1 (7/98)

70 scf/hr = as submitted in application

37.77 mmBtu/hr = rating of flare as submitted in application

0.068 lb/mmBtu = emission factor from AP-42, Table 13.5-1 (1/95)

c. Emissions Limitation:

Total CO emissions from the pilot gas and flared gas shall not exceed 61.23 tons per rolling, 12-month period.



Applicable Compliance Method:

The annual emissions limitation was established based on the following calculations:

Pilot gas emissions:

$$(84 \text{ lb/mmscf})(70 \text{ scf/hr})(1/1,000,000)(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 0.026 \text{ ton/year}$$

Flared gas emissions:

$$(0.37 \text{ lb/mmBtu})(37.77 \text{ mmBtu/hr})(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 61.21 \text{ tons/year}$$

Total CO emissions:

$$0.026 \text{ ton/year} + 61.21 \text{ tons/year} = 61.24 \text{ tons/year}$$

Where:

84 lb/mmscf = emission factor from AP-42, Table 1.4-1 (7/98)

70 scf/hr = as submitted in application

37.77 mmBtu/hr = rating of flare as submitted in application

0.068 lb/mmBtu = emission factor from AP-42, Table 13.5-1 (1/95)

g) Miscellaneous Requirements

(1) None.



6. P015, Enclosed flare #102 (2.19 MMBtu/hr) to control non-condensable still vent vapors

Operations, Property and/or Equipment Description:

1,002 scfh (2.188 MMBtu/hr) enclosed flare #102 – 100% capture and 98% control efficiency of VOC emissions from the non-condensable still vent vapors associated with the dehydration process (including emissions from three 75-MMSCFD dehydration units).

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Total volatile organic compounds (VOC) emissions from the pilot gas and flared gas combined shall not exceed 1.83 lbs/hour and 8.03 tons per year. Total nitrogen oxide (NOx) emissions from the pilot gas and flared gas shall not exceed 0.15 lb/hr and 0.65 ton per year. Total carbon monoxide (CO) emissions from the pilot gas and flared gas shall not exceed 0.81 lb/hr and 3.54 tons per year. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b. below.
c.	OAC rule 3745-31-05(C), as effective 12/01/06	See b)(2)c. below.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant emissions less than ten tons per year. However, that rule revision has



not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revision to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limits/control measures no longer apply.

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

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

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

PTI P0113393 for this air contaminant source takes into account the following voluntary restriction (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):

- i. Total VOC emissions from the pilot gas and flared gas combined shall not exceed 8.03 tons per year.
- ii. VOC emissions from the non-condensable still vent vapors associated with the dehydration process shall be vented to the flare with 100% capture efficiency and 98% capture efficiency.

c) Operational Restrictions

- (1) VOC emissions from the non-condensable still vent vapors associated with the dehydration process shall be vented to the flare with 100% capture efficiency and 98% capture efficiency.
- (2) The permittee shall burn only natural gas in this emissions unit.
- (3) The flare shall be designed and operated as follows:
 - a. A pressure sensor shall be maintained at all times on the flare to detect the need for a flame; and
 - b. The device to monitor the flare for the presence of flame shall be in operation at all times the pressure sensor detects a need for a flame.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain records of each day a fuel other than natural gas is burned in this emissions unit.



- (2) The permittee shall properly install, operate, and maintain a pressure sensor and flame detection device to monitor the need for a flame and presence of a flame, respectively, when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
- (3) The permittee shall record the following information each day for the flare and process operations:
 - a. All periods during which the pressure sensor and/or flame detection device were not functioning properly; and
 - b. The operating times for the flare and monitoring equipment.
- e) Reporting Requirements
 - (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
 - (2) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of 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.
- f) Testing Requirements
 - (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emissions Limitations:

Total VOC emissions from the pilot gas and flared gas combined shall not exceed 1.83 lbs/hour and 8.03 tons per year.

Applicable Compliance Method:

The annual emissions limitation was established based on the following calculations:

Pilot gas emissions:

$$(5.5 \text{ lb/mm scf})(10 \text{ scf/hr})(1/1,000,000)(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 0.0002 \text{ ton/year}$$

Flared gas emissions:

$$(1.83 \text{ lbs/hr})(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 8.02 \text{ tons/year}$$



Total VOC emissions:

$$0.0002 \text{ ton/year} + 8.02 \text{ tons/year} = 8.03 \text{ tons/year}$$

Where:

$$5.5 \text{ lb/mmscf} = \text{emission factor from AP-42 Table 1.4-1 (7/98)}$$

$$10 \text{ scf/hr} = \text{as submitted in application}$$

$$1.83 \text{ lbs/hr} = \text{VOC emissions estimated as submitted in application, based on a 98\% control efficiency.}$$

b. Emissions Limitations:

Total CO emissions from the pilot gas and flared gas shall not exceed 0.81 lb/hr and 3.54 tons per year.

Applicable Compliance Method:

The annual emissions limitation was established based on the following calculations:

Pilot gas emissions:

$$(84 \text{ lb/mmscf})(10 \text{ scf/hr})(1/1,000,000)(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 0.0037 \text{ ton/year}$$

Flared gas emissions:

$$(0.37 \text{ lb/mmBtu})(2.18 \text{ mmBtu/hr})(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 3.53 \text{ tons/year}$$

Total CO emissions:

$$0.0037 \text{ ton/year} + 3.53 \text{ tons/year} = 3.54 \text{ tons/year}$$

Where:

$$84 \text{ lb/mmscf} = \text{emission factor from AP-42, Table 1.4-1 (7/98)}$$

$$10 \text{ scf/hr} = \text{as submitted in application}$$

$$2.18 \text{ mmBtu/hr} = \text{rating of flare as submitted in application}$$

$$0.37 \text{ lb/mmBtu} = \text{emission factor from AP-42, Table 13.5-1 (1/95)}$$

c. Emissions Limitations:

Total NOx emissions from the pilot gas and flared gas shall not exceed 0.15 lb/hr and 0.65 ton per year.



Applicable Compliance Method:

The annual emissions limitation was established based on the following calculations:

Pilot gas emissions:

$$(100 \text{ lb/mm scf})(10 \text{ scf/hr})(1/1,000,000)(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 0.004 \text{ ton/year}$$

Flared gas emissions:

$$(0.068 \text{ lb/mm Btu})(2.18 \text{ mm Btu/hr})(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 0.65 \text{ ton/year}$$

Total NOx emissions:

$$0.004 \text{ ton/year} + 0.65 \text{ tons/year} = 0.65 \text{ ton/year}$$

Where:

100 lb/mm scf = emission factor from AP-42, Table 1.4-1 (7/98)

10 scf/hr = as submitted in application

2.18 mmBtu/hr = rating of flare as submitted in application

0.068 lb/mmBtu = emission factor from AP-42, Table 13.5-1 (1/95)

g) Miscellaneous Requirements

(1) None.



7. P016, Standard flare #103 – control of emissions from condensate and processed water tank working, breathing, flashing loss and control of emissions from truck loading of condensate and processed water

Operations, Property and/or Equipment Description:

1,061 scfh (7.01 mmBtu/hr) standard flare #103 to control emissions from condensate and processed water storage tank working, breathing, flashing loss (T001) and control of emissions from truck loading of condensate and processed water (J001).

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) 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 3704.3(T)	Total carbon monoxide (CO) emissions from the pilot gas and flared gas shall not exceed 11.36 tons per rolling, 12-month period.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Total nitrogen oxide (NOx) emissions from the pilot gas and flared gas shall not exceed 0.48 lb/hr and 2.09 ton per year. See b)(2)a. below.
c.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b. below.

(2) Additional Terms and Conditions

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



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

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

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

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.
- (2) The flare shall be designed and operated as follows:
 - a. The flare shall be operated with a minimum of 100% capture and a 98% destruction efficiency of VOC; and
 - b. The flare shall be operated at all times when emissions may be vented to it.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall record the following information each day for the flare and process operations:
 - a. The operating times for the flare and monitoring equipment.
- (2) The permittee shall maintain records of each day a fuel other than natural gas is burned in this emissions unit.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of 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. Emissions Limitations:

Total CO emissions from the pilot gas and flared gas shall not exceed 11.36 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emissions limitation was established based on the following calculations:

Pilot gas emissions:

$$(84 \text{ lb/mm scf})(10 \text{ scf/hr})(1/1,000,000)(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 0.0037 \text{ ton/year}$$

Flared gas emissions:

$$(0.37 \text{ lb/mmBtu})(7.01 \text{ mmBtu/hr})(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 11.36 \text{ tons/year}$$

Total CO emissions:

$$0.0037 \text{ ton/year} + 11.36 \text{ tons/year} = 11.36 \text{ tons/year}$$

Where:

84 lb/mm scf = emission factor from AP-42, Table 1.4-1 (7/98)

10 scf/hr = as submitted in application

7.01 mmBtu/hr = rating of flare as submitted in application

0.37 lb/mmBtu = emission factor from AP-42, Table 13.5-1 (1/95)

b. Emissions Limitations:

Total NO_x emissions from the pilot gas and flared gas shall not exceed 0.48 lb/hr and 2.09 ton per year.

Applicable Compliance Method:

The annual emissions limitation was established based on the following calculations:

Pilot gas emissions:

$$(100 \text{ lb/mm scf})(10 \text{ scf/hr})(1/1,000,000)(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 0.004 \text{ ton/year}$$



Flared gas emissions:

$(0.068 \text{ lb/mmBtu})(7.01 \text{ mmBtu/hr})(8,760 \text{ hrs/year})(1 \text{ ton}/2,000 \text{ lbs}) = 2.09 \text{ ton/year}$

Total NOx emissions:

$0.004 \text{ ton/year} + 2.09 \text{ tons/year} = 2.09 \text{ ton/year}$

Where:

100 lb/mmscf = emission factor from AP-42, Table 1.4-1 (7/98)

10 scf/hr = as submitted in application

7.01 mmBtu/hr = rating of flare as submitted in application

0.068 lb/mmBtu = emission factor from AP-42, Table 13.5-1 (1/95)

g) Miscellaneous Requirements

(1) None.



8. P017, Equipment maintenance blowdown emissions

Operations, Property and/or Equipment Description:

Equipment maintenance blowdown emissions where it is not feasible to vent to a flare for control; based on a maximum of 60 events per year (of P001 thru P010) equal to approximately 7.56 tons per year total.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01.	Fugitive volatile organic compound (VOC) emissions shall not exceed 7.56 tons per year. See b)(2)a. and c)(1) below.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b. below.

(1) Additional Terms and Conditions

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



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

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

c) Operational Restrictions

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

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain the following records on a monthly basis:
 - a. the date, number and type of each maintenance blowdown event;
 - b. mole% of each VOC component in the gas stream using a representative analysis;
 - c. total volume of gas emitted from each maintenance blowdown event; and
 - d. total volume of gas emitted from all maintenance blowdown events as a rolling, 12-month total.
 - e. total tons of VOC emissions per rolling, 12-month period.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
- (3) The permittee shall submit annual reports that identify:
 - a. The rolling, 12-month summation of VOC emissions; and
 - b. the annual volume of natural gas released from this emissions unit.

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:

Fugitive VOC emissions shall not exceed 7.56 tons per year.

Applicable Compliance Method:

The VOC emissions limitation was established by the following calculation using the inputs provided in the permittee's application, provided gas analysis plus 10% safety factor and the recordkeeping requirements in d)(1):

$$\begin{aligned} \text{VOC (tons/yr)} = & \\ & [(\text{total VOC estimate for P001-P010 blowdowns combined} \times \# \text{ of blowdown} \\ & \text{events per year}) \\ & \times 1 \text{ ton}/2,000 \text{ pounds} \end{aligned}$$

Where:

Total VOC emissions estimate for a P001 thru P010 blowdown event = 306 lbs/event

Emissions estimate for an annual period with 60 blowdown events = XX lbs/yr, then multiplied by the VOC content of approximately 19.909 % and multiplied by 1 ton / 2,000 lb = 7.56 tons per year.

g) Miscellaneous Requirements

(1) None.



9. P801, Equipment leaks

Operations, Property and/or Equipment Description:

Equipment leaks from various components, including connectors, flanges, compressors, open ended lines, pump seals, and valves.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Fugitive emissions of Volatile Organic Compounds (VOC) shall not exceed 6.13 tons per rolling, 12-month period. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b. below.

(1) Additional Terms and Conditions

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



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

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

- c) Operational Restrictions

- (1) None.

- d) Monitoring and/or Recordkeeping Requirements

- (1) Leak detection and repair program

- a. The permittee shall develop and implement a leak detection and repair program designed to monitor and repair leaks from ancillary equipment and compressors covered by this permit. This leak detection and repair program shall include the following elements:
 - b. An initial and then annual inspection of the ancillary and associated equipment and compressors shall be conducted to determine if a leak exists. Leaks shall be determined through the use of an analyzer meeting U.S. EPA Method 21, 40 CFR Part 60, Appendix A.
 - c. The analyzer shall be operated and maintained following the instrument manufacturer's operation and maintenance instructions.
 - d. A leak shall be determined if the instrument reading is equal to or greater than 10,000 ppm total VOC or the "leak detected" instrument reading required per any applicable rule.
 - e. Documentation that includes the following:
 - 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; and
 - iv. the date the component was repaired and determined to no longer be leaking.

- e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
 - (2) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of 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. Emissions Limitation:

Fugitive emissions of VOC shall not exceed 6.13 tons per rolling, 12-month period.

Applicable Compliance Method:

The rolling, 12-month VOC emissions limitation was established by the following calculation based on the emissions factors (lb/hr/component) provided in the permittee's application and the provided speciated gas analysis (VOC emissions + 10% safety factor):

VOC = [(# of valves in gas service X gas service valve EF X 0.199089 VOC wt fraction + 10%)

+ (# of valves in light oil service X light oil service valve EF X 1.0 VOC wt fraction + 10%)

+ (# of pump seals in light oil service X light oil service pump EF X 1.00 VOC wt fraction+ 10%)

+ (# of flanges in gas service X gas service flange EF X 0.199089 VOC wt fraction + 10%)

+ (# of connectors in gas service X gas service connector EF X 0.199089 VOC wt fraction+ 10%)

+ (# of connectors in light oil service X light oil service connector EF X 1.00 VOC wt fraction + 10%)

+ (# of compressor seals in gas service X gas service compressor seals EF X 0.199089 VOC wt fraction + 10%)

+ (# of relief valves in gas service X gas service relief valve EF X 0.199089 VOC wt fraction + 10%),

+ (# of other sources in gas service X gas service other sources EF X 0.1990889 VOC wt fraction + 10%)

+ (# of other sources in light oil service X light oil service other sources EF X 1.0 VOC wt fraction + 10%)], then

X 8,760 hrs/yr X 1 ton/2,000 lbs ≤ 6.13 tons per rolling, 12-month period.



Where:

Valve EFs = 0.54 lb/hr/source for gas service, and 0.36 lb/hr/source for light oil service

Pump Seal EFs = 0.13 lb/hr/source for light oil service;

Flange EFs = 0.08 lb/hr/source for gas service;

Connector EFs = 0.03 lb/hr/source for gas service, and 0.02 lb/hr/source for light oil service;

Compressor seals EFs = 0.04 lb/hr/source for gas service;

Relief valves EFs = 0.11 lb/hr/source for gas service;

Other sources* EFs = 0.02 lb/hr/source for gas service; and 0.07 lb/hr/source for light oil service

* includes compressors, drains/vents, pressure safety valves and sample points

g) Miscellaneous Requirements

(1) None.



10. T001, Condensate and produced water storage tanks

Operations, Property and/or Equipment Description:

Condensate and Produced water storage including four 400 bbl (16,800 gallon) condensate storage tanks and two 400 bbl (16,800 gallon) produced water storage tanks. All working, breathing, and flashing emissions vented to a VRU with 100% control efficiency or vented to standard flare #103 with a 98% control efficiency of VOC. Tank emissions are permitted at worst case assuming all emissions are vented to the flare.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) 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)	Total Volatile Organic compounds (VOC) emissions from all condensate and produced water tanks shall not exceed 13.34 tons per rolling, 12-month period.
b.	40 CFR Part 60, Subpart OOOO (60.5360-60.5430) [In accordance with 60.5365 (e), this emissions units constitutes a storage vessel that is located at an affected crude oil and natural gas production, transmission and distribution facility]	Each tank at this facility has a potential to emit after control of less than 6 TPY are therefore, exempt from the requirements of 40 CFR Part 60, Subpart OOOO Following the compliance date of October 15, 2013, each storage vessel constructed, modified, or reconstructed after August 23, 2011 and with VOC emissions calculated to exceed 6 tons per year, shall reduce VOC emissions by 95% or greater. See b)(2)b..
c.	40 CFR Part 60, Subpart A (60.1-60.19)	General provisions may apply.



(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant emissions less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio’s State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revision to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally–approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, these emission limitations/control measures no longer apply.
- b. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart OOOO, including the following sections:

60.5395(a), (c), (d), (e) and (f)	Group 2 storage vessel requirements
60.5410(h)	Initial compliance demonstration
60.5411 (b), (c) and 60.5412(d)	Additional requirements for initial compliance
60.5415(e)	Continuous compliance requirements

c) Operational Restrictions

- (1) Emissions from working, breathing, and flashing loss shall be vented to a flare with a VOC control efficiency of 98% or vented to a vapor recovery unit (VRU) with a VOC control efficiency of 100%. The flare shall be designed and operated as required in emissions unit P016.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall record the annual throughput of each tank in gallons per year. The permittee shall keep records of U.S. EPA Tanks software program and/or other process simulation program calculations used to demonstrate annual storage tank and process vent emissions. These records shall be maintained for at least 5 years and shall be made available to the Director or his representative upon verbal or written request.



- (2) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart OOOO, including the following sections:

60.5416(c), 60.5417(h)	Monitoring requirements
60.5420(c)	Record keeping requirements

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
- (3) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart OOOO, including the following sections:

60.5420(a) and (b)	Notifications and reports
--------------------	---------------------------

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 method:

a. Emissions Limitation:

Total VOC emissions from all condensate and produced water tanks shall not exceed 13.34 tons per rolling, 12-month period.

Applicable Compliance Methods:

Compliance with the above emissions limitation shall be determined using a current version of the U.S. EPA's TANKS software program for storage tank working/breathing losses; either the TANKS software program or other process simulation programs such as, but not limited to, HYSYS or ProMax, to calculate flash losses; the Gas Research Institute's simulation program GLY Calc version 4 or equivalent to calculate flash tank off-gas emissions; and an assumed destruction efficiency of 98% for the flare as presented in the application.

g) Miscellaneous Requirements

- (1) Any amendment to 40 CFR Part 60, Subpart OOOO shall supersede the compliance limitations and/or options contained in this permit.