Ohio Environmental Protection Agency

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

8/24/2015

Certified Mail

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
No	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Andrew Parisi
Thatcher Compressor Station
999 18th Street
Suite 3400S
Denver, CO 80202

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0607115005
Permit Number: P0118304
Permit Type: Initial Installation
County: Belmont

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)385-8501 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

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

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

FINAL

Division of Air Pollution Control
Permit-to-Install
for
Thatcher Compressor Station

Facility ID:	0607115005
Permit Number:	P0118304
Permit Type:	Initial Installation
Issued:	8/24/2015
Effective:	8/24/2015

Ohio Environmental Protection Agency

Division of Air Pollution Control
Permit-to-Install
for
Thatcher Compressor Station

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Authorization

Facility ID:	0607115005
Facility Description:	
Application Number(s):	A0052545, A0053075, A0053501
Permit Number:	P0118304
Permit Description:	Initial installation of compressor station with dehydration
Permit Type:	Initial Installation
Permit Fee:	$3,800.00
Issue Date:	8/24/2015
Effective Date:	8/24/2015

This document constitutes issuance to:

Thatcher Compressor Station
Cats Run Road
Powhatan Point, OH 43942

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

Craig W. Butler
Director

Authorization (continued)

Permit Number: P0118304
Permit Description: Initial installation of compressor station with dehydration

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:	F001
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**J001**
Company Equipment ID:	J001
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P001**
Company Equipment ID:	Compressor Engine #1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P002**
Company Equipment ID:	P002
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P003**
Company Equipment ID:	P003
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P004**
Company Equipment ID:	P004
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P005**
Company Equipment ID:	P005
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P006**
Company Equipment ID:	P006
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P009**
Company Equipment ID:	P009
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P011**
Company Equipment ID:	P011
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P012**

Company Equipment ID:	P012
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P013**
Company Equipment ID:	P013
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P801**
Company Equipment ID:	P801
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T001**
Company Equipment ID:	T001
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T002**
Company Equipment ID:	T002
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T003**
Company Equipment ID:	T003
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**T004**
Company Equipment ID:	T004
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

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) 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 emissionlimitations, operationalrestrictions, andcontroldeviceoperatingparameterlimitations, 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, andreportingrequirements contained in this permit shall be submitted 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 theOhio EPA DAPC, Southeast District Officein 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) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted

local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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.

b) 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.

c) 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 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)not exempt from the requirement to obtain a Permit-to-Install.

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 permittee 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 "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director 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.

Unless otherwise exempted,no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

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 operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d)must be <u>obtained before</u>operating the source in a manner that would violate the existing Title V permit requirements.

13. Construction Compliance Certification

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

a) Completion of initial installation date shall be enteredupon 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 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.

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) See B.2.

2. Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), for this project were not necessary because for the emissions units not exempted from modeling per OEPA 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 when controlled. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified PTI 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.

3. 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.

4. Deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

5. This facility is subject to 40 CFR Part 60, Subpart OOOO. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the e-CFR website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

6. This facility is subject to 40 CFR Part 60, Subpart JJJJ. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the e-CFR website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

7. This facility is subject to 40 CFR Part 63, Subpart HH. The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the e-CFR website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office of local air agency.

8. This facility is subject to 40 CFR Part 63, Subpart ZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines at Area Sources. Although Ohio EPA has determined that this GACT applies, at this time Ohio EPA does not have the authority to enforce this standard. Instead, US EPA has the authority to enforce this standard. Please be advised that all requirements associated with this rule are in effect and shall be enforced by US EPA. For more information on the area source rules, please refer to the following US EPA website: http://www.epa.gov/ttn/atw/area/arearules.html.

9. Abbreviations throughout are as follows:

Pollutants

NO_x	nitrogen oxides
CO	carbon monoxide
VOC	volatile organic compound
PE	particulate emissions

Units

TPY	tons per year
lb	pound
g	gram
Mg	megagram
gal	gallon
bbl	barrel
M	thousand
MM	million
scf	standard cubic foot
Btu	British thermal units
hp	horsepower
bhp	brake horsepower
hr	hour
min	minute
m	month
yr	year

Regulations

OAC	Ohio Administrative Code
ORC	Ohio Revised Code
CFR	Code of Federal Regulations
e-CFR	Electronic Code of Federal Regulation
BAT	Best Available Technology
MACT	Maximum Achievable Control Technology
NSPS	New Source Performance Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
GACT	Generally Available Control Technology

General

PTE	Potential to Emit
EF	Emissions factor
PTI	Permit-to-Install
EU	Emissions Unit
SIP	State Implementation Plan
SEDO	Southeast District Office

C. Emissions Unit Terms and Conditions

1. J001 Truck Loading

Operations, Property and/or Equipment Description:

Uncontrolled truck loading of produced water from storage tanks (T001-T004) into tanker trucks

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 June 30, 2008	VOC emissions shall not exceed 0.10 tons/m as a rolling, 12-month average. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the PTE is < 10 TPY. See b)(2)b. below.

2) Additional Terms and Conditions

a. This BAT emissions limit applies until US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption as part of the Ohio SIP.

b. These requirements apply once US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption) as part of the Ohio SIP.

c) Operational Restrictions

1) Prior to connecting the produced water transfer line(s) from the storage tank to the tanker truck, the permittee shall inspect all fittings, valves, gaskets, and fasteners that will be used during the transfer to ensure they are in proper condition (i.e., not corroded, torn, worn, stripped, or otherwise damaged) and will result in vapor tight connections.

2) During the loading of produced water from the storage tank to the tanker truck, the permittee shall continually monitor the transfer equipment, the storage tank, and the

tanker truck for any leaks through visual, olfactory, or other observations. If any leak is detected, loading of the produced water shall cease until the leaking component has been repaired.

3) The permittee shall not permit 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 maintain records of the throughput of the emissions unit in Mgal/d.

e) Reporting Requirements

1) See B. 3.-4.

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:

VOC emissions shall not exceed 0.10 tons/m as a rolling, 12-month average.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

$$\frac{7.17\ gal}{min} * \frac{60\ min}{hr} * \frac{8{,}760\ hr}{yr} * \frac{Mgal}{1{,}000\ gal} * \frac{0.66\ lb\ VOC}{Mgal} * \frac{ton}{2{,}000\ lb} * \frac{yr}{12\ m} = \frac{0.10\ tons\ VOC}{rolling\ 12\ m}$$

Where:

7.17 = maximum liquid accumulation in storage tanks (ProMax)
0.66 = VOC EF (AP-42, Section 5.2)

Ongoing compliance shall be demonstrated using the above equation and the recordkeeping in d) above.

g) Miscellaneous Requirements

1) None.

2. P009 Dehydrator

Operations, Property and/or Equipment Description:

Triethylene glycol dehydration unit removing moisture from compressed field gas; dehydration unit emissions routed through condenser to combustor (P012); flash tank off gas emissions routed through storage tanks (T001-T004) and to combustor (P011)

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 June 30, 2008	VOC emissions shall not exceed 0.71 lb/hr. VOC emissions shall not exceed 3.10 TPY. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the calculated annual emission rate is < 10 TPY due to the voluntary restriction from OAC rule 3745-31-05(E). See b)(2)b. below.
c.	OAC rule 3745-31-05(E), as effective June 30, 2008	VOC emissions shall not exceed 3.10 TPY.
d.	40 CFR Part 63, Subpart HH (40 CFR 63.760-63.779) [In accordance with 40 CFR 63.760(a)(2)-(3), this emissions unit processes, upgrades, or stores natural gas or hydrocarbon liquids prior to the point of custody transfer from the facility.]	See b)(2)c. below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	40 CFR 63.1-15 (40 CFR 63.764)	Table 2 of Subpart HH of 40 CFR Part 63 shows which parts of the General Provisions in 40 CFR 63.1-15 apply.

2) Additional Terms and Conditions

a. This BAT emissions limit applies until US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption as part of the Ohio SIP.

b. These requirements apply once US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption) as part of the Ohio SIP.

c. The dehydration unit located at this facility is subject to 40 CFR Part 63, Subpart HH, NESHAP from Oil and Natural Gas Production Facilities. The dehydration units at this facility are exempt per 63.764(e)(1)(ii) from the requirements of 63.764(d) because actual average emissions of benzene from the glycol dehydration unit process venting to the atmosphere are less than 0.90 Mg/yr, as determined by the procedures specified in 63.772(b)(2) of 40 CFR 63, Subpart HH.

d. The permittee shall comply with applicable requirements of 40 CFR Part 63, Subpart HH, including the following sections:

63.764(j)	Control equipment
63.775(c)(8)	Exemption

c) Operational Restrictions

1) The permittee shall operate the condenser and combustors at all times in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modification deemed necessary by the permittee.

2) The permittee shall operate the condenser and combustors P011 (controlling storage tanks T001-T004) and P012 at all times during which the dehydration unit (P009) is operating.

d) Monitoring and/or Recordkeeping Requirements

1) The permittee shall maintain records of natural gas flow rate in MMscf/d.

2) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the condenser and combustors, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.

3) The permittee shall conduct periodic inspections of the condenser and combustors to determine whether they are operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency, and it shall be made available to Ohio EPA upon request.

4) The permittee shall document each inspection of the condenser and combustors and shall maintain the following information:

   a. the date of the inspection;

   b. a description of each/any problem identified and the date it was corrected;

   c. a description of any maintenance and repairs performed; and

   d. the name of the person who performed the inspection.

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

5) The permittee shall maintain records that document any time periods when the condensers or combustors were not in service when the emissions unit(s) was/were in operation, as well as a record of all operations during which the combustors were not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to Ohio EPA upon request.

6) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measure and recordthe combustor outlet temperature of the combustors when the organic vapors are being routed to the combustors, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. These records shall be maintained for a period of no less than five years. These records can be kept electronically, provided they can be made available to the appropriate Ohio EPA District Office or local air agency.

7) For the condenser, the permittee must:

   a. continuously monitor and record the vapor outlet temperature of the condenser;

   b. record all periods of time when the condenser is not operating correctly to control the emissions from the dehydration still vent.

8) The composition of the gas being processed may vary due to the nature of the industry. The company will sample the gas semiannually to perform a detailed gas analysis in order to determine if the composition has changed such that it will result in an increase in emissions of any toxic air contaminant. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request. After one year, the permittee may petition the Agency to adjust the frequency of sampling.

9) The permittee shall comply with applicable requirements of 40 CFR Part 63, Subpart HH, including the following sections:

63.760(a)(2)	Applicability
63.772(b)(2)	Actual average BTEX emissions
63.774(b)(1)	File maintenance
63.774(d)(1)	Exemption recordkeeping
63.774(d)(1)(ii)	Actual average annual benzene emissions

e) Reporting Requirements

1) See B. 3.-4.

2) The permittee shall submit quarterly deviation reports that identify any deviation from the operational restrictions in c)(1) and c)(2). These reportsshall be submitted in accordance with the reporting requirements of the StandardTermsand 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:

VOC emissions shall not exceed 0.71 lb/hr.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

$$\frac{744.78\ lb}{hr} * 4.75\%\ VOC\ (1 - 0.98) = \frac{0.71\ lb\ VOC}{hr}$$

Where:

744.78 = total mass flow rate (ProMax 3.2 simulation)
4.75 = VOC weight percent (ProMax 3.2 simulation)

Ongoing compliance shall be demonstrated using the following equation and the recordkeeping in d) above.

$$E = (1 - 0.98) * M$$

Where:

E = hourly controlled VOC emission rate in lb/hr
0.98 = combustor control efficiency
M = hourly uncontrolled VOC mass emission rate in lb/hr of the condenser outlet stream as simulated in GRI-GLYCalc™ as below and using inputs in d) above.

The permittee may determine the VOC emissions (excludes methane and ethane) using the GRI-GLYCalc™ model, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit(s) and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled ‘‘Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions’’ (GRI–95/0368.1).

The VOC emissions limitation is based on glycol circulation rate, natural gas flow rate, VOC destruction efficiency, and the worst case pollutant concentrations from representative gas analysis of the inlet gas from d) above.

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

b. Emissions Limitation:

VOC emissions shall not exceed 3.10 TPY.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee’s application:

$$\frac{744.78\ lb}{hr} * 4.75\%\ VOC\ (1 - 0.98)\frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 3.10\ TPY$$

Where:

744.78 = total mass flow rate (ProMax 3.2 simulation)
4.75 = VOC weight percent (ProMax 3.2 simulation)

Ongoing compliance shall be demonstrated using the following equation and the recordkeeping in d) above.

$$E = (1 - 0.98) * M$$

Where:

E = annual controlled VOC emission rate in TPY
0.98 = combustor control efficiency
M = annual uncontrolled VOC mass emission rate in TPY of the condenser outlet stream as simulated in GRI-GLYCalc™ as below and using inputs in d) above.

The permittee may determine the VOC emissions (excludes methane and ethane) using the GRI-GLYCalc™ model, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit(s) and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled ''Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions'' (GRI–95/0368.1).

The VOC emissions limitation is based on glycol circulation rate, natural gas flow rate, VOC destruction efficiency, and the worst case pollutant concentrations from representative gas analysis of the inlet gas from d) above.

g) Miscellaneous Requirements

1) None.

3. P011 Combustor #1

Operations, Property and/or Equipment Description:

Combustor to control organic vapor loss emissions from the storage tanks (T001-T004) and flash tank off-gas from dehydration (P009) routed to the storage tanks

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 June 30, 2008	NO_x emissions shall not exceed 0.42 lb/hr. NO_x emissions shall not exceed 1.86 TPY. CO emissions shall not exceed 0.83 lb/hr. CO emissions shall not exceed 3.66 TPY. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, PE, SO_2, or CO emissions from this air contaminant source since the PTE is < 10 TPY. See b)(2)b. below.

2) Additional Terms and Conditions

a. This BAT emissions limit applies until US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption as part of the Ohio SIP.

b. These requirements apply once US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption) as part of the Ohio SIP.

c) Operational Restrictions

1) The permittee shall operate the combustor at all times T001-T004 and P009 are operating and in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modification deemed necessary by the permittee.

d) Monitoring and/or Recordkeeping Requirements

1) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the combustor, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.

2) The permittee shall conduct periodic inspections of the combustor to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency, and it shall be made available to Ohio EPA upon request.

3) The permittee shall document each inspection of the combustor and shall maintain the following information:

a. the date of the inspection;

b. a description of each/any problem identified and the date it was corrected;

c. a description of any maintenance and repairs performed; and

d. the name of the person who performed the inspection.

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

4) The permittee shall maintain records that document any time periods when the combustor was not in service when the emissions unit(s) was/were in operation, as well as a record of all operations during which the combustor were not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to Ohio EPA upon request.

5) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measure and recordthe combustor outlet temperature when the organic vapors are being routed to the combustor, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and

operating manual(s), with any modifications deemed necessary by the permittee. These records shall be maintained for a period of no less than five years. These records can be kept electronically, provided they can be made available to the appropriate Ohio EPA District Office or local air agency.

6) The composition of the gas being processed may vary due to the nature of the industry. The company will sample the gas semiannually to perform a detailed gas analysis in order to determine if the composition has changed such that it will result in an increase in emissions of any toxic air contaminant. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request. After one year, the permittee may petition the Agency to adjust the frequency of sampling.

e) Reporting Requirements

1) See B. 3.-4.

2) The permittee shall submit quarterly deviation reports that identify any deviation from the operational restrictions in c)(1). These reportsshall be submitted in accordance with the reporting requirements of the StandardTermsand 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:

NO_x emissions shall not exceed 0.42 lb/hr.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

<u>Storage tank emissions</u>:

$$\frac{0.138\ lb\ NOx}{MMBtu} * \frac{79{,}936\ scf}{hr} * \frac{37.29\ Btu}{scf} * \frac{MMBtu}{10E6\ Btu} = \frac{0.41\ lb\ NOx}{hr}$$

Where:

0.138 = NO_x EF (TNRCC Rg-109, Table 4)

<u>Pilot emissions</u>:

$$\frac{100\ lb\ NOx}{MMscf} * \frac{50\ scf}{hr} * \frac{2{,}517\ Btu}{scf} * \frac{Btu}{1{,}020\ scf} * \frac{MMscf}{10E6\ scf} = \frac{0.01\ lb\ NOx}{hr}$$

Where:

100 = NO_x EF (AP-42, Section 1.4, Table 1.4-1)

Total:

Storage tank emissions + pilot emissions = 0.42 lb NO_x/hr

Ongoing compliance shall be demonstrated using the following equation and the recordkeeping in d) above.

$$E = \frac{0.138\ lb\ NOx}{MMBtu} * \frac{MMBtu}{10E6\ Btu}(V1 * H1 + V2 * H2) + 0.01$$

Where:

E = hourly NO_x emission rate in lb/hr
0.138 = NO_x EF (TNRCC Rg-109, Table 4)
V1 = volumetric flow rate in scf/hr of storage tank vapors as simulated in E&P Tanks software using the records required under C.8.(d)(1) with conversion as inputs
H1 = heat content in Btu/scf of the storage tank vapors as simulated in E&P Tanks software using the records required under C.8.d)(1) with conversion as inputs
V2 = volumetric flow rate in scf/hr of flash tank off gas from dehydration as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
H2 = heat content in Btu/scf of the flash tank off gas from dehydration as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
0.01 = hourly NO_x emission rate from pilot burner in lb/hr

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

b. Emissions Limitation:

NO_x emissions shall not exceed 1.86 TPY.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

Storage tank emissions:

$$\frac{0.138\ lb\ NOx}{MMBtu} * \frac{79{,}936\ scf}{hr} * \frac{37.29\ Btu}{scf} * \frac{MMBtu}{10E6\ Btu} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 1.802\ TPY$$

Where:

0.138 = NO_x EF (TNRCC Rg-109, Table 4)

Pilot emissions:

$$\frac{100\ lb\ NOx}{MMscf} * \frac{50\ scf}{hr} * \frac{2{,}517\ Btu}{scf} * \frac{Btu}{1{,}020\ scf} * \frac{MMscf}{10E6\ scf} \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 0.054\ TPY$$

Where:

100 = NO_x EF (AP-42, Section 1.4, Table 1.4-1)

Total:

Storage tank emissions + pilot emissions = 1.86 TPY NO_x

Ongoing compliance shall be demonstrated using the following equation and the recordkeeping in d) above.

$$E = \frac{0.138\ lb\ NOx}{MMBtu} * \frac{MMBtu}{10E6\ Btu} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb}(V1 * H1 + V2 * H2) + 0.054$$

Where:

E = annual NO_x emission rate in TPY
0.138 = NO_x EF (TNRCC Rg-109, Table 4)
V1 = volumetric flow rate in scf/hr of storage tank vapors as simulated in E&P Tanks software using the records required under C.8.(d)(1) with conversion as inputs
H1 = heat content in Btu/scf of storage tank vapors as simulated in E&P Tanks software using the records required under C.8.d)(1) with conversion as inputs
V2 = volumetric flow rate in scf/hr of flash tank off gas from dehydration as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
H2 = heat content in Btu/scf of the flash tank off gas from dehydration as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
0.054 = annual NO_x emission rate from pilot burner in TPY

c. Emissions Limitation:

CO emissions shall not exceed 0.83 lb/hr.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

Storage tank emissions:

$$\frac{0.276\ lb\ CO}{MMBtu} * \frac{79{,}936\ scf}{hr} * \frac{37.29\ Btu}{scf} * \frac{MMBtu}{10E6\ Btu} = \frac{0.82\ lb\ CO}{hr}$$

Where:

0.276 = CO EF (TNRCC Rg-109, Table 4)

Pilot emissions:

$$\frac{84\ lb\ CO}{MMscf} * \frac{50\ scf}{hr} * \frac{2{,}517\ Btu}{scf} * \frac{Btu}{1{,}020\ scf} * \frac{MMscf}{10E6\ scf} = \frac{0.01\ lb\ CO}{hr}$$

Where:

84 = CO EF (AP-42, Section 1.4, Table 1.4-1)

Total:

Storage tank emissions + pilot emissions = 0.83 lb CO/hr

Ongoing compliance shall be demonstrated using the following equation and the recordkeeping in d) above.

$$E = \frac{0.276\ lb\ CO}{MMBtu} * \frac{MMBtu}{10E6\ Btu}(V1 * H1 + V2 * H2) + 0.01$$

Where:

E = hourly CO emission rate in lb/hr
0.276 = CO EF (AP-42, Section 1.4, Table 1.4-1)
V1 = volumetric flow rate in scf/hr of storage tank vapors as simulated in E&P Tanks software using the records required under C.8.(d)(1) with conversion as inputs
H1 = heat content in Btu/scf of storage tank vapors as simulated in E&P Tanks software using the records required under C.8.d)(1) with conversion as inputs
V2 = volumetric flow rate in scf/hr of flash tank off gas from dehydration as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs

H2 = heat content in Btu/scf of the flash tank off gas from dehydration as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs

0.01 = hourly CO emission rate from pilot burner in lb/hr

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

d. Emissions Limitation:

CO emissions shall not exceed 3.66 TPY.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

Storage tank emissions:

$$\frac{0.276\ lb\ CO}{MMBtu} * \frac{79{,}936\ scf}{hr} * \frac{37.29\ Btu}{scf} * \frac{MMBtu}{10E6\ Btu} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 3.60\ TPY$$

Where:

0.276 = CO EF (TNRCC Rg-109, Table 4)

Pilot emissions:

$$\frac{84\ lb\ CO}{MMscf} * \frac{50\ scf}{hr} * \frac{2{,}517\ Btu}{scf} * \frac{Btu}{1{,}020\ scf} * \frac{MMscf}{10E6\ scf} \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 0.06\ TPY$$

Where:

84 = CO EF (AP-42, Section 1.4, Table 1.4-1)

Total:

Storage tank emissions + pilot emissions = 3.66 TPY CO

Ongoing compliance shall be demonstrated using the following equation and the recordkeeping in d) above.

$$E = \frac{0.276\ lb\ CO}{MMBtu} * \frac{MMBtu}{10E6\ Btu} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb}(V1 * H1 + V2 * H2) + 0.06$$

Where:

E = annual CO emission rate in TPY
0.276 = CO EF (AP-42, Section 1.4, Table 1.4-1)
V1 = volumetric flow rate in scf/hr of storage tank vapors as simulated in E&P Tanks software using the records required under C.8.(d)(1) with conversion as inputs
H1 = heat content in Btu/scf of storage tank vapors as simulated in E&P Tanks software using the records required under C.8.d)(1) with conversion as inputs
V2 = volumetric flow rate in scf/hr of flash tank off gas from dehydration as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
H2 = heat content in Btu/scf of the flash tank off gas from dehydration as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
0.06 = annual CO emission rate from pilot burner in TPY

g) Miscellaneous Requirements

1) None.

4. P012 Combustor #2

Operations, Property and/or Equipment Description:

Combustor to control off-gas emissions from the dehydration unit

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 June 30, 2008	NO_x emissions shall not exceed 0.14 lb/hr. NO_x emissions shall not exceed 0.60 TPY. CO emissions shall not exceed 0.26 lb/hr. CO emissions shall not exceed or 1.15 TPY. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, PE, SO_2, or CO emissions from this air contaminant source since the PTE is < 10 TPY. See b)(2)b. below.

2) Additional Terms and Conditions

a. This BAT emissions limit applies until US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption as part of the Ohio SIP.

b. These requirements apply once US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption) as part of the Ohio SIP.

c) Operational Restrictions

1) The permittee shall operate the combustor at all times P009 is operating and in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modification deemed necessary by the permittee.

d) Monitoring and/or Recordkeeping Requirements

1) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the combustor, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.

2) The permittee shall conduct periodic inspections of the combustor to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency, and it shall be made available to Ohio EPA upon request.

3) The permittee shall document each inspection of the combustor and shall maintain the following information:

a. the date of the inspection;

b. a description of each/any problem identified and the date it was corrected;

c. a description of any maintenance and repairs performed; and

d. the name of the person who performed the inspection.

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

4) The permittee shall maintain records that document any time periods when the combustor was not in service when the emissions unit(s) was/were in operation, as well as a record of all operations during which the combustor were not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to Ohio EPA upon request.

5) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measure and recordthe combustor outlet temperature when the organic vapors are being routed to the combustor, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and

operating manual(s), with any modifications deemed necessary by the permittee. These records shall be maintained for a period of no less than five years. These records can be kept electronically, provided they can be made available to the appropriate Ohio EPA District Office or local air agency.

6) The composition of the gas being processed may vary due to the nature of the industry. The company will sample the gas semiannually to perform a detailed gas analysis in order to determine if the composition has changed such that it will result in an increase in emissions of any toxic air contaminant. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request. After one year, the permittee may petition the Agency to adjust the frequency of sampling.

e) Reporting Requirements

1) See B. 3.-4.

2) The permittee shall submit quarterly deviation reports that identify any deviation from the operational restrictions in c)(1). These reportsshall be submitted in accordance with the reporting requirements of the StandardTermsand 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:

NO_x emissions shall not exceed 0.14 lb/hr.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

<u>Dehydration unit emissions</u>:

$$\frac{0.138\ lb\ NOx}{MMBtu} * \frac{9{,}972\ scf}{hr} * \frac{91.26\ Btu}{scf} * \frac{MMBtu}{10E6\ Btu} = \frac{0.13\ lb\ NOx}{hr}$$

Where:

0.138 = NO_x EF (TNRCC Rg-109, Table 4)

<u>Pilot emissions</u>:

$$\frac{100\ lb}{MMscf} * \frac{50\ scf}{hr} * \frac{2{,}517\ Btu}{scf} * \frac{Btu}{1{,}020\ scf} * \frac{MMscf}{10E6\ scf} = \frac{0.01\ lb\ NOx}{hr}$$

Where:

100 = NO_x EF (AP-42, Section 1.4, Table 1.4-1)

Total:

Dehydration unit emissions + pilot emissions = 0.14 lb NO_x/hr

Ongoing compliance shall be demonstrated using the following equation and the recordkeeping in d) above.

$$E = \frac{0.138\ lb\ NOx}{MMBtu} * \frac{MMBtu}{10E6\ Btu}(V1 * H1 + V2 * H2) + 0.01$$

Where:

E = hourly NO_x emission rate in lb/hr
0.138 = NO_x EF (TNRCC Rg-109, Table 4)
V1 = volumetric flow rate in scf/hr of the condenser outlet stream as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
H1 = heat content in Btu/scf of the condenser outlet stream as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
0.01 = hourly NO_x emission rate from pilot burner in lb/hr

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

b. Emissions Limitation:

NO_x emissions shall not exceed 0.60 TPY.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

Dehydration unit emissions:

$$\frac{0.138\ lb\ NOx}{MMBtu} * \frac{9{,}972\ scf}{hr} * \frac{91.26\ Btu}{scf} * \frac{MMBtu}{10E6\ Btu} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 0.55\ TPY$$

Where:

0.138 = NO_x EF (TNRCC Rg-109, Table 4)

Pilot emissions:

$$\frac{100\ lb\ NOx}{MMscf} * \frac{50\ scf}{hr} * \frac{2{,}517\ Btu}{scf} * \frac{Btu}{1{,}020\ scf} * \frac{MMscf}{10E6\ scf} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 0.05\ TPY$$

Where:

100 = NO_x EF (AP-42, Section 1.4, Table 1.4-1)

Total:

Dehydration unit emissions + pilot emissions = 0.60 TPY NO_x

Ongoing compliance shall be demonstrated using the following equation and the recordkeeping in d) above.

$$E = \frac{0.138\ lb\ NOx}{MMBtu} * \frac{MMBtu}{10E6\ Btu} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb}(V1 * H1) + 0.05$$

Where:

E = annual NO_x emission rate in TPY
0.138 = NO_x EF (TNRCC Rg-109, Table 4)
V1 = volumetric flow rate in scf/hr of the condenser outlet stream as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
H1 = heat content in Btu/scf of the condenser outlet stream as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
0.05 = annual NO_x emission rate from pilot burner in TPY

c. Emissions Limitation:

CO emissions shall not exceed 0.26 lb/hr.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

Dehydration unit emissions:

$$\frac{0.276\ lb\ CO}{MMBtu} * \frac{9{,}972\ scf}{hr} * \frac{91.26\ Btu}{scf} * \frac{MMBtu}{10E6\ Btu} = \frac{0.25\ lb\ CO}{hr}$$

Where:

0.276 = CO EF (TNRCC Rg-109, Table 4)

Pilot emissions:

$$\frac{84\ lb\ CO}{MMscf} * \frac{50\ scf}{hr} * \frac{2{,}517\ Btu}{scf} * \frac{Btu}{1{,}020\ scf} * \frac{MMscf}{10E6\ scf} = \frac{0.01\ lb\ CO}{hr}$$

Where:

84 = CO EF (AP-42, Section 1.4, Table 1.4-1)

Total:

Dehydration unit emissions + pilot emissions = 0.26 lb CO/hr

Ongoing compliance shall be demonstrated using the following equation and the recordkeeping in d) above.

$$E = \frac{0.276\ lb\ CO}{MMBtu} * \frac{MMBtu}{10E6\ Btu}(V1 * H1 + V2 * H2) + 0.01$$

Where:

E = hourly CO emission rate in lb/hr
0.276 = CO EF (TNRCC Rg-109, Table 4)
V1 = volumetric flow rate in scf/hr of the condenser outlet stream as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
H1 = heat content in Btu/scf of the condenser outlet stream as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
0.01 = hourly CO emission rate from pilot burner in lb/hr

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

d. Emissions Limitation:

CO emissions shall not exceed 1.15 TPY.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

Dehydration unit emissions:

$$\frac{0.276\ lb\ CO}{MMBtu} * \frac{9{,}972\ scf}{hr} * \frac{91.26\ Btu}{scf} * \frac{MMBtu}{10E6\ Btu} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 1.10\ TPY$$

Where:

0.276 = CO EF (TNRCC Rg-109, Table 4)

Pilot emissions:

$$\frac{84\ lb\ CO}{MMscf} * \frac{50\ scf}{hr} * \frac{2{,}517\ Btu}{scf} * \frac{Btu}{1{,}020\ scf} * \frac{MMscf}{10E6\ scf} \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 0.05\ TPY$$

Where:

84 = CO EF (AP-42, Section 1.4, Table 1.4-1)

Total:

Dehydration unit emissions + pilot emissions = 1.15 TPY CO

Ongoing compliance shall be demonstrated using the following equation and the recordkeeping in d) above.

$$E = \frac{0.276\ lb\ CO}{MMBtu} * \frac{MMBtu}{10E6\ Btu} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb}(V1 * H1) + 0.05$$

Where:

E = annual CO emission rate in TPY
0.276 = CO EF (AP-42, Section 1.4, Table 1.4-1)
V1 = volumetric flow rate in scf/hr of the condenser outlet stream as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
H1 = heat content in Btu/scf of the condenser outlet stream as simulated in GRI-GLYCalc™ using the records required under C.2.d)(1) as inputs
0.05 = annual CO emission rate from pilot burner in TPY

g) Miscellaneous Requirements

1) None.

5. P013 Blowdowns and Pigging Operations

Operations, Property and/or Equipment Description:

Process releases associated with routine operations and periodic maintenance blowdown activities, including pig launching and receiving

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 June 30, 2008	VOC emissions shall not exceed 0.27 tons/m as a rolling, 12-month average. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the PTE is < 10 TPY. See b)(2)b. below.

2) Additional Terms and Conditions

a. This BAT emissions limit applies until US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption as part of the Ohio SIP.

b. These requirements apply once US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption) as part of the Ohio SIP.

c) Operational Restrictions

1) None.

d) Monitoring and/or Recordkeeping Requirements

1) The permittee shall maintain the following records:

a. the date, number, and type of each blowdown and/or pigging event;

b. percent VOC fraction in the gas stream obtained by representative sampling and analysis (e.g., gas chromatography);

c. total volume of gas emitted from each blowdown and/or pigging event; and

d. total volume of gas emitted from all blowdown and/or pigging events per year.

e) Reporting Requirements

1) See B. 3.-4.

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:

VOC emissions shall not exceed 0.27 tons/m as a rolling, 12-month average.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

$$\sum \frac{[(576 * 104\ lb\ ) + (1 * 235\ lb) + (1 * 4{,}864\ lb) + (1 * 6{,}080\ lb) + (104 * 109\ lb) + (104 * 346\ lb)]}{yr} * \frac{ton}{2{,}000\ lb} * 5.52\%\ VOC * \frac{yr}{12\ m\ rolling\ average}] \leq 0.27 \frac{tons\ VOC}{m} rolling, 12\ m\ average$$

Where:

576, 104 = compressor engine blowdowns count, lb VOC/event/year
1, 235 = 200 psi equipment blowdowns count, lb VOC/event/year
1, 4,864 = 1,200 psi equipment blowdowns count, lb VOC/event/year
1, 6,080 = 1,300 psi equipment blowdowns count, lb VOC/event/year
104, 109 = pig launcher releases count, lb VOC/event/year
104, 346 = pig receiver releases count, lb VOC/event/year

Ongoing compliance shall be demonstrated using the above equation and the recordkeeping in d) above.

g) Miscellaneous Requirements

1) None.

6. P801 Equipment Leaks

Operations, Property and/or Equipment Description:

Fugitive equipment leaks from various components, including pneumatic controllers, valves, pumps, flanges, and connectors

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 June 30, 2008	Develop and implement a site-specific leak detection and repair programfor ancillary equipment as described in c) below. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source taking into account the voluntary restriction from OAC rule 3745-31-05(E). See b)(2)b. below.
c.	OAC rule 3745-31-05(E), as effective June 30, 2008	VOC emissions shall not exceed 2.2 TPY. Develop and implement a site-specific leak detection and repair programfor ancillary equipment as described in c) below.
d.	40 CFR Part 60, Subpart OOOO (60.5360-60.5430) [In accordance with 40 CFR Part 60.5365(d)(2), this emission unit includes pneumatic controller affected facility, which is a single continuous bleed natural gas-driven pneumatic controller operating at a	See b)(2)c. below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	natural gas bleed rate greater than sixscf/h for which constriction commenced after August 23, 2011.]	
e.	40 CFR Part 60.1-19 (40 CFR 60.4246)	Table 3 to Subpart OOOO of 40 CFR Part 60 – Applicability of General Provisions to Subpart OOOO shows which part of the General Provisions in 40 CFR Part 60.1-19 apply.

2) Additional Terms and Conditions

a. This BAT emissions limit applies until US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption as part of the Ohio SIP.

b. These requirements apply once US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption) as part of the Ohio SIP.

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

60.5370(a)	When must I comply?
60.5390(c)(1)	Pneumatic controller standards
60.5410(d)(2)	Pneumatic controller driven by a gas other than natural gas
60.5410(d)(3)	Pneumatic controller emits less than or equal to six scf/hr.

c) Operational Restrictions

1) Ancillary Equipment Leak Detection and Repair Program

The permittee shall develop and implement a leak detection and repair program designed to monitor and repair leaks from ancillary equipment covered by this permit, including each pump, compressor, pressure relief device, connector, valve, flange, vent, cover, any bypass in the closed vent system, and each storage vessel. This program shall meet the following requirements:

a. Leaks shall be detected by the use of either a “Forward Looking Infra Red” (FLIR) camera or an analyzer meeting U.S. EPA Method 21 of 40 CFR Part 60, Appendix A-7.

b. An initial monitoring shall be completed within 90 days of startup and quarterly thereafter.

c. Following the initial four consecutive quarters, if less than or equal to 2.0% of the ancillary equipment are determined to be leaking during the most recent quarterly monitoring event, the frequency of monitoring can be reduced to semi-annual.

d. Following two consecutive semi-annual periods, if less than 2.0% of the ancillary equipment are determined to be leaking during the most recent semi-annual monitoring event, the frequency of the monitoring can be reduced to annual.

e. If 2.0% or more of the ancillary equipment are determined to be leaking during any one of the semi-annual or annual monitoring events, then the frequency of monitoring shall be returned to quarterly.

f. The program shall require the first attempt at repair within five days of determining a leak.

g. The program shall require that the leaking component is repaired within 30 days after the leak is detected.

h. The program shall allow for the delayed repair of a leaking component following the language in 40 CFR 60.5416(c)(5).

i. The program shall following the Monitoring and Recordkeeping requirements described in paragraph 5.d) of this permit.

2) In the event that a leak or defect is detected in the cover, closed vent system, process equipment, or control device, the permittee shall make a first attempt at repair no later than five days after the leak is detected. Repair shall be completed no later than 30 days after the leak is detected following the languagein 40 CFR 60.5416(c)(4). Any delay of repair of a leak or defect shall meet the requirements following the language of 40 CFR 60.5416(c)(5).

3) The permittee shall perform daily inspections each day that an operator is at the facility and when the facility is in operation for indications of releases from the pressure relief valves, as well as any olfactory, visual, or auditory indications of equipment leaks. The positive indication of a release or a leak shall be noted in an operations log, along with the following information:

a. the name of the inspector;

b. the date and time inspected;

c. the identification of the pressure relief valve that released and/or piece of equipment that leaked;

d. the estimated or calculated duration of the pressure relief valve release and/or equipment leak and the estimated emission totals; and

e. any corrective actions taken to minimize or eliminate the release or leak.

4) The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart OOOO, including the following sections:

60.5390(c)(2)	Pneumatic controller tagging requirements

d) Monitoring and/or Recordkeeping Requirements

1) Ancillary Equipment Leak Detection and Repair Program Monitoring and Recordkeeping for Programs Utilizing FLIR Cameras

a. Leaks shall be determined by visually observing each ancillary component through the FLIR camera to determine if leaks are visible.

b. The following information shall be recorded during each leak inspection:

i. the date the inspection was conducted;

ii. the name of the employee conducting the leak check;

iii. the identification of any component that was determined to be leaking;

iv. the date the first attempt to repair the component was made;

v. the reason the repair was delayed following the language found in 40 CFR 60.5416(c)(5);

vi. the date the component was repaired and determined to no longer be leaking;

vii. the total number of components that are leaking; and

viii. the percentage of components leaking, determined as the sum of the number of components for which a leak was detected, divided by the total number of ancillary components capable of developing a leak, and multiplied by 100.

c. The permittee shall maintain records that demonstrate the FLIR camera is operated and maintained in accordance with the manufacturer's operation and maintenance instructions.

d. The records from each inspection and the dates each leak is detected and repaired shall be maintained for at least five years and shall be made available to the Director or his representative upon verbal or written request.

2) Ancillary Equipment Leak Detection and Repair Program Monitoring and Recordkeeping for Programs Utilizing a Method 21 Analyzer

a. Leaks shall be measured by utilizing U.S. EPA Method 21 (40 CFR Part 60, Appendix A-7).All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm or 10,000 ppm (as applicable) for determining compliance.

b. A component is considered to be leaking if the instrument reading is equal to or greater than:

pressure relief device in gas/vapor service 10,000 ppm

pressure relief device in light liquid service 10,000 ppm

pumps in light liquid service 10,000 ppm

compressor 500 ppm

sampling connection system* *

open ended valves or lines** **

valves in gas/vapor and light liquid service 10,000 ppm

closed vent system 500 ppm

connectors 10,000 ppm

all other ancillary and associated equipment in VOC service10,000 ppm

* must be equipped with a closed-purge, closed-loop, or closed-vent system

** must be equipped with a cap, blind flange, plug, or a second valve

c. The following information shall be recorded during each leak inspection:

i. the date the inspection was conducted;

ii. the name of the employee conducting the leak check;

iii. the identification of any component that was determined to be leaking (company ID and component type (flange, pump, etc.);

iv. the date the first attempt to repair the component was made;

v. the reason the repair was delayed following the language in 40 CFR 60.5416(c)(5);

vi. the date the component was repaired and determined to no longer be leaking;

vii. the total number of components that are leaking; and

viii. the percentage of components leaking, determined as the sum of the number of components for which a leak was detected, divided by the total number of ancillary components capable of developing a leak, and multiplied by 100.

d. The permittee shall maintain records that demonstrate the Method 21 analyzer is operated and maintained in accordance with the manufacturer's operation and maintenance instructions.

e. In order to calibrate the analyzer, the following calibration gases shall be used:

i. zero air, which consists of less than 10 ppm of hydrocarbon in air; and

ii. a mixture of air and methane or n-hexane at a concentration of approximately, but less than, 10,000 ppm of methane or n-hexane.

f. The records from each inspection and the dates each leak is detected and repaired shall be maintained for at least five years and shall be made available to the Director or his representative upon verbal or written request.

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

60.5420(c)(4)	Pneumatic controller recordkeeping requirements

e) Reporting Requirements

1) See B. 3.-4.

2) For each inspection that occurred during the year as part of the Ancillary Equipment Leak Detection and Repair Program, the permittee shall submit the following information by January 31 annually from data collected by the ancillary equipment leak detection and repair program:

a. the date of the inspection;

b. the number of components determined to be leaking;

c. the company ID and component type (flange, pump, etc.) of each leaking component;

d. the total number of components at the site;

e. the percent of components determined to be leaking;

f. a list of all components that have not been repaired due to a delay of repair and the reason for the delay; and

g. a notification indicating if the permittee has changed future inspection frequencies based on the percent of components leaking.

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

60.5420(b)	Reporting requirements
60.5420(b)(5)	Pneumatic controller reporting requirements

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:

VOC emissions shall not exceed 2.2 TPY.

Applicable Compliance Method:

Compliance with the fugitive VOC emissions limitation shall be demonstrated by the following calculation based on the emissions factors provided in Table 2-4 of US EPA's Protocol for Equipment Leak Emission Estimates (11/95) for components in gas, light oil, and water/oil service and the information provided in the permittee's application:

$$\left(\sum component\ count * component\ TOC\ EF * max\ leak\ rates * 1.2\ safety\ factor * VOC\ weight\ percent\right) \leq 2.2\ TPY$$

Where component counts, max leak rates, TOC EFs, VOC weight percent, and scheduled maintenance venting parameters are based on the data provided in the permittee's application.

g) Miscellaneous Requirements

1) None.

7. Emissions Unit GroupP001 – P006: Engines

EU ID	Operations, Property and/or Equipment Description
P001	Natural gas-fired, four-stroke, lean burn internal combustion engine, 3,482 hp equipped with oxidation catalyst
P002	Natural gas-fired, four-stroke, lean burn internal combustion engine, 3,482 hp equipped with oxidation catalyst
P003	Natural gas-fired, four-stroke, lean burn internal combustion engine, 3,482 hp equipped with oxidation catalyst
P004	Natural gas-fired, four-stroke, lean burn internal combustion engine, 3,482 hp equipped with oxidation catalyst
P005	Natural gas-fired, four-stroke, lean burn internal combustion engine, 3,482 hp equipped with oxidation catalyst
P006	Natural gas-fired, four-stroke, lean burn internal combustion engine, 3,482 hp equipped with oxidation catalyst

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) and OAC rule 3745-31-05(A)(3)	NO_x emissions shall not exceed 3.84 lb/hr. NO_x emissions shall not exceed 16.81 TPY. VOC emissions shall not exceed 4.64 lb/hr. VOC emissions shall not exceed 20.32 TPY.
b.	OAC rule 3745-31-05(A)(3), as effective June 30, 2008	CO emissions shall not exceed 1.48 lb/hr. CO emissions shall not exceed 6.47 TPY. PE shall not exceed 1.2 TPY.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as	The BAT requirements under OAC rule

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	effective June 30, 2008	3745-31-05(A)(3) do not apply to the CO, PE, or SO_2 emissions from this air contaminant source since the calculated annual emission rate is < 10 TPY due to the voluntary restriction from OAC rule 3745-31-05(E). See b)(2)b. below.
d.	OAC rule 3745-31-05(E), as effective June 30, 2008	CO emissions shall not exceed 1.48 lb/hr. CO emissions shall not exceed 6.47 TPY.
e.	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 ≥ 500 hp, natural gas fired, stationary spark internal combustion engine manufactured after July 1, 2010 and is subject to the emission limitations and control measures specified in this section.]	The emissions limits for NO_x, CO, and VOC are less stringent than those established under OAC rules 3745-31-05(A)(3) and 3745-31-05(E). [40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1] See b)(2)c. below.
f.	40 CFR Part 60, Subpart OOOO (60.5360-60.5430) [In accordance with 40 CFR Part 60.5365(c), this emissions unit is a reciprocating compressor affected facility, which is a single reciprocating compressor located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment which commenced construction after August 23, 2011.]	See b)(2)d. below.
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.	OAC rule 3745-17-07(A)(1)	Visible PE from the stack serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by the rule.
i.	OAC rule 3745-17-11(B)(5)(b)	PE shall not exceed 0.062 lb/MMBtu actual heat input.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		This emission limitation is less stringent than the limitation listed under OAC rule3745-31-05(A)(3), until such time as U.S.EPA approves OAC rule 3745-05(A)(3)(a)(ii)(the less than 10 TPY BAT exemption) as part of the Ohio SIP.

2) Additional Terms and Conditions

a. This BAT emissions limit applies until US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption as part of the Ohio SIP.

b. These requirements apply once US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption) as part of the Ohio SIP.

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

60.4234	Engine standards longevity
60.4243(b)	Demonstrating compliance
60.4246	General provisions

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

60.5370(a)	When must I comply?

c) Operational Restrictions

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

2) The permittee shall install and operate the engine with a catalyst for the control of VOC and CO emissions whenever this emissions unit is in operation and shall maintain the engine in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.

3) In the event the engine is not operating in accordance with the manufacturer's recommendations, instructions, or operating manual, with any modifications deemed necessary by the permittee, the engine shall be expeditiously repaired or otherwise returned to these documented operating conditions.

4) The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart OOOO, including the following sections:

60.5385(a)	Replace the reciprocating compressor

	rod packing

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 requirements of 40 CFR Part 60, Subpart JJJJ, including the following sections:

60.4243(b)(2)	Purchasing a non-certified engine
60.4243(b)(2)(ii)	Maintenance plan and records
60.4243(e)	Emergency propane use
60.4245(a)(1)	Notification records
60.4245(a)(2)	Engine maintenance records
60.4245(a)(4)	Non-certified engines

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

60.5410(c)(1)	Demonstrating initial compliance in reciprocating compressors
60.5415(c)(1)	Demonstrating continuing compliance in reciprocating compressors
60.5420(c)(3)	Reciprocating compressors 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) The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart JJJJ, including the following sections:

60.4245(c)	Initial notification
60.4245(d)	Performance testing notification

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

60.5420(a)(1)	Notifications not required in §60.7(a)(1), (3), and (4)
60.5420(b)	Reporting requirements
60.5420(b)(4)	Reciprocating compressors reporting

	requirements

f) Testing Requirements

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

a. Emissions Limitation:

NO_x emissions shall not exceed 3.84 lb/hr.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

$$3{,}482\ bhp * \frac{0.5\ g\ NOx}{bhp - hr} * \frac{lb}{453.59g} = 3.84 \frac{lb\ NOx}{hr}$$

Where:

3,482 = maximum rated hp
0.5 = NO_x EF (manufacturer's specification)

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

b. Emissions Limitation:

NO_x emissions shall not exceed 16.81 TPY.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

$$\frac{3.84\ lb\ NOx}{hr} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 16.81\ TPY$$

c. Emissions Limitation:

VOC emissions shall not exceed 4.64 lb/hr.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

$$3{,}482\ bhp * \frac{0.604\ g\ VOC}{bhp - hr} * \frac{lb}{453.59g} = 4.64 \frac{lb\ VOC}{hr}$$

Where:

3,482 = maximum rated hp
0.604 = VOC EF (manufacturer's specification with 50% catalytic reduction)

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

d. Emissions Limitation:

VOC emissions shall not exceed 20.32 TPY.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

$$\frac{4.64\ lb\ VOC}{hr} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 20.32\ TPY$$

e. Emissions Limitation:

CO emissions shall not exceed 1.48 lb/hr.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

$$3{,}482\ bhp * \frac{0.19g\ CO}{bhp - hr} * \frac{lb}{453.59g} = 1.48 \frac{lb\ CO}{hr}$$

Where:

3,482 = maximum rated hp
0.19 = CO EF (manufacturer's specification with 93% catalytic reduction)

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

f. Emissions Limitation:

CO emissions shall not exceed 6.47 TPY.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

$$\frac{1.48\ lb\ CO}{hr} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 6.47\ TPY$$

g. Emissions Limitation:

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

Applicable Compliance Method:

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

h. Emissions Limitation:

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

Applicable Compliance Method:

If required, PE shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources." Alternative US EPA-approved test methods may be used with prior approval from Ohio EPA, SEDO.

i. Emissions Limitation:

PE shall not exceed 1.2 TPY.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

$$\frac{0.00999\ lb\ PE}{MMBtu} * \frac{26.21\ MMBtu}{hr} * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 1.2\ TPY\ PE$$

Where:

0.00999 = PE EF (AP-42 Section 3.2, Table 3.2-2
26.21 = engine heat input capacity

2) When purchasing a non-certified engine, the permittee shall demonstrate 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 has chosen to demonstrate compliance with the emission standards specified in §60.4233(e) and OAC rule 3745-31-05(A)(3) 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) and OAC rule 3745-31-05(A)(3) 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, SEDO. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, SEDO's refusal to accept the results of the emission test(s);

e. personnel from the Ohio EPA, SEDO shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment; and

f. a comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, SEDO within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, SEDO.

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

60.4244(a)	Performance testing
60.4244(b)	Performance testing in startup, shutdown, and malfunction
60.4244(c)	Performance testing runs
60.4244(d)	NO_X mass per unit output emission limitation
60.4244(e)	Performance testing CO
60.4244(f)	VOC and formaldehyde
60.4244(g)	Corrected VOC emissions calculations

g) Miscellaneous Requirements

1) None.

8. Emissions Unit Group T001 – T004: Storage Tanks

EU ID	Operations, Property and/or Equipment Description
T001	Produced water storage tank, 400 bbl, fixed roof, including liquids from condenser associated with dehydrator (P009), controlled by combustor P011
T002	Produced water storage tank, 400 bbl, fixed roof, including liquids from condenser associated with dehydrator (P009), controlled by combustor P011
T003	Produced water storage tank, 400 bbl, fixed roof, including liquids from condenser associated with dehydrator (P009), controlled by combustor P011
T004	Produced water storage tank, 400 bbl, fixed roof, including liquids from condenser associated with dehydrator (P009), controlled by combustor P011

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 June 30, 2008	VOC emissions shall not exceed 0.23 lb/hr. VOC emissions shall not exceed 0.98 TPY. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the calculated annual emission rate is < 10 TPY due to the voluntary restriction from OAC rule 3745-31-05(E). See b)(2)b. below.
c.	OAC rule 3745-31-05(E), as effective June 30, 2008	VOC emissions shall not exceed 0.98 TPY.
d.	40 CFR Part 60, Subpart OOOO (60.5360-60.5430)	Pursuant to 40 CFR Part 60.5365(e), each storage vessel at this facility has a PTE of less than six TPY and is,

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	In accordance with 40 CFR, 60.5365(e), this emissions unit is a single storage vessel located in the oil and natural gas production segment, natural gas processing segment, or natural gas transmission and storage segment.	therefore, exempt from the requirements of 40 CFR Part 60, Subpart OOOO.
e.	40 CFR Part 60, Subpart A (60.1-60.19)	Table 3 to Subpart OOOO of 40 CFR Part 60 – Applicability of General Provisions to Subpart OOOO shows which part of the General Provisions in 40 CFR Part 60.1-19 apply.

2) Additional Terms and Conditions

a. This BAT emissions limit applies until US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption as part of the Ohio SIP.

b. These requirements apply once US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption) as part of the Ohio SIP.

c) Operational Restrictions

1) Vapors from the produced water tanks shall be vented to and controlled at all times by a combustor (P011).

2) The permittee shall operate the combustor at all times in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modification deemed necessary by the permittee.

3) The permittee shall install and operate a system to automatically close the shut-down valves for the produced water inlet line(s) to the storage tanks in order to prevent the tank(s) from uncontrolled venting. This system shall continuously monitor either tank pressure, liquid level, or both.

d) Monitoring and/or Recordkeeping Requirements

1) The permittee shall maintain records of the throughput of the emissions unit in bbl/d.

2) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the combustor, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.

3) The permittee shall conduct periodic inspections of the combustor to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency, and it shall be made available to the Ohio EPA upon request.

4) The permittee shall document each inspection of the combustor and shall maintain the following information:

   a. the date of the inspection;

   b. a description of each/any problem identified and the date it was corrected;

   c. a description of any maintenance and repairs performed; and

   d. the name of the person who performed the inspection.

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

5) The permittee shall maintain records that document any time periods when the combustor was not in service when the emissions unit(s) was/were in operation, as well as a record of all operations during which the combustor was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request.

6) The permittee shall collect a pressurized produced water sample within 90 days of the first facility startup and perform a detailed gas analysis in order to determine the VOC and HAP composition. This sampling shall be repeated on a semiannual basis.

7) The permittee shall record the following information on a monthly basis:

   a. the number of valve shutdowns from the inlet separator that result from the storage tank pressure or storage tank liquid level reaching the value established in c)(3), including the date and time, duration and reason; and

   b. the number of uncontrolled releases to the atmosphere that result from the produced water tank pressure or produced water level exceeding the values established in c)(3). Details of these releases shall be immediately provided to the Ohio EPA per OAC rule 3745-15-06(B).

8) The permittee shall properly install, operate, and maintain a continuous pressure monitor and recorder that measure and recordthe pressureand/or the liquid level within the produced water tank when the emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure/liquid level on a continuous

basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. These records shall be maintained for a period of no less than five years. These records can be kept electronically, provided they can be made available to the appropriate Ohio EPA District Office or local air agency.

9) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measure and recordthe combustor outlet temperature when the organic vapors are being routed to the combustor, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. These records shall be maintained for a period of no less than five years. These records can be kept electronically, provided they can be made available to the appropriate Ohio EPA District Office or local air agency.

e) Reporting Requirements

1) See Section B. 3.-4.

2) The permittee shall submit quarterly deviation reports that identify any deviation from the operational restrictions in c)(1), c)(2), or c)(3). These reportsshall be submitted in accordance with the reporting requirements of the StandardTermsand 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:

VOC emissions shall not exceed 0.23 lb/hr.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

$$\frac{6{,}134\ lb}{hr} * 0.73\%\ (1 - 0.98) \div 4\ tanks = \frac{0.23\ lb\ VOC}{hr}$$

Where:

6,134 = total mass flow rate (ProMax 3.2 simulation)
0.73 = VOC weight percent (ProMax 3.2 simulation)

Ongoing compliance shall be demonstrated using the following equation and the recordkeeping in d) above.

$$E = (1 - 0.98) * M$$

Where:

E = hourly controlled VOC emission rate in lb/hr
0.98 = combustor control efficiency
M = hourly uncontrolled VOC emission rate in lb/hr from storage tank vapors as simulated in E&P Tanks using the records required under d) as inputs.

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

b. Emissions Limitation:

VOC emissions shall not exceed 0.98 TPY.

Applicable Compliance Method:

The emissions limitation was derived by the calculation below using inputs provided in the permittee's application:

$$\frac{6{,}134\ lb}{hr} * 0.73\%\ (1 - 0.98) \div 4\ tanks * \frac{8{,}760\ hr}{yr} * \frac{ton}{2{,}000\ lb} = 0.98\ TPY$$

Where:

6,134 = total mass flow rate (ProMax 3.2 simulation)
0.73 = VOC weight percent (ProMax 3.2 simulation)

Ongoing compliance shall be demonstrated using the following equation and the recordkeeping in d) above.

$$E = (1 - 0.98) * M$$

Where:

E = annual controlled VOC emission rate in TPY
0.98 = combustor control efficiency
M = annual uncontrolled VOC emission rate in TPY from storage tank vapors as simulated in E&P Tanks using the records required under d) as inputs.

g) Miscellaneous Requirements

1) None.

9. F001, Unpaved Roadways

Operations, Property and/or Equipment Description:

Unpaved roadways and parking areas with a maximum of 10,811 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 June 30, 2008	PE shall not exceed 5.1 TPY. PM_{10} shall not exceed 1.4 TPY. The permittee shall employ best available control measures to minimize or eliminate visible emissions of fugitive dust. No visible PE from any unpaved roadway or parking area except for a period of time not to exceed three minutes during any 60-minute observation period. See b)(2)a. and c.-g. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE emissions from this air contaminant source since the calculated annual emissions are < 10 TPY taking into account the voluntary restriction from OAC rule 3745-31-05(E). The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM_{10} emissions from this air contaminant source since the calculated annual emissions are < 10 TPY. See b)(2)b. below.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(E)	PE shall not exceed 5.1 TPY. All vehicles on unpaved roads and parking areas shall obey a 15 miles/hour speed limit.
d.	OAC rule 3745-17-07(B)(5)	No visible PE from any unpaved roadway or parking area except for a period of time not to exceed 13 minutes during any 60-minute observation period. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3) until US EPA approves the revisions to OAC rule 3745-31-05(A)(3)(a)(ii) as part of the Ohio SIP.
e.	OAC rule 3745-17-08(B)	See b)(2)c.-g. below. The emission limitation specified by this rule is less stringent than or equivalent to the emission limitation established pursuant to OAC rule 3745-31-05(A)(3) until US EPA approves the revisions to OAC rule 3745-31-05(A)(3)(a)(ii) as part of the Ohio SIP.

2) Additional Terms and Conditions

a. This BAT emissions limit applies until US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption as part of the Ohio SIP.

b. These requirements apply once US EPA approves OAC rule 3745-31-05(A)(3)(a)(ii) (the < 10 TPY BAT exemption) as part of the Ohio SIP.

c. The permittee shall employ best/reasonably 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 re-suspension, 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. 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 and the requirements of OAC rule 3745-17-08.

c) Operational Restrictions

1) All vehicles on unpaved roads and parking areas shall obey a 15 miles/hour speed limit.

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:

unpaved roadways and parking areas	minimum inspection frequency
all unpaved roads and parking areas	weekly

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.

4) The information required in 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) The permittee shall submit quarterly deviation reports that identify any of the following occurences:

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;

b. each instance when a control measure that was to be implemented as a result of an inspection was not implemented.

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. Emission Limitation:

PE shall not exceed 5.1 TPY.

Applicable Compliance Method:

Compliance with annual emissions limitations shall be determined based on the emission factor calculations for unpaved roadways and parking areas in AP-42 Section 13.2.2 (11/06) and a maximum of 10,811 annual vehicle miles traveled as demonstrated by the following equation:

$k(s/12)^a(W/3)^b * (365-p/365)(1-CE_{speed}) = EF$

$EF * VMT \leq 5.1$ TPY

Where:

k = particle size multiplier (lb/VMT)
s = surface material silt content (%)
W = mean vehicle weight (tons)
p = number of rain days per year >0.01 inches

CE = control efficiency
EF = particulate emission factor (lb/VMT)
VMT = vehicle miles traveled

b. Emissions Limitation:

PM_{10} shall not exceed 1.4 TPY.

Applicable Compliance Method:

Compliance with annual emissions limitations shall be determined based on the emission factor calculations for unpaved roadways and parking areas in AP-42 Section 13.2.2 (11/06) and a maximum of 10,811 annual vehicle miles traveled as demonstrated by the following equation:

$k(s/12)^a(W/3)^b * (365-p/365)(1-CE_{speed}) = EF$

$EF * VMT \leq 1.4$ TPY

Where:

k = particle size multiplier (lb/VMT)
s = surface material silt content (%)
W = mean vehicle weight (tons)
p = number of rain days per year >0.01 inches
CE = control efficiency
EF = particulate emission factor (lb/VMT)
VMT = vehicle miles traveled

c. Emission Limitation:

No visible PE from any unpaved roadway or parking area except for a period of time not to exceed three minutes during any 60-minute observation period.

Applicable Compliance Method:

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

d. Emission Limitation:

No visible PE from any unpaved roadway or parking area except for a period of time not to exceed 13 minutes during any 60-minute observation period

Applicable Compliance Method:

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

g) Miscellaneous Requirements

1) None.