



Environmental Protection Agency

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

9/28/2012

Nathan Wheldon
Cadiz Gas Plant
1515 Arapahoe Street
Suite 1600 - Tower 1
Denver, CO 80202-2137

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0634005029
Permit Number: P0110243
Permit Type: Initial Installation
County: Harrison

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	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

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
309 South Fourth Street, Room 222
Columbus, OH 43215

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. This permit can be accessed electronically on the DAPCWeb page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-SEDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Cadiz Gas Plant**

Facility ID:	0634005029
Permit Number:	P0110243
Permit Type:	Initial Installation
Issued:	9/28/2012
Effective:	9/28/2012
Expiration:	9/28/2022



Division of Air Pollution Control
Permit-to-Install and Operate
for
Cadiz Gas Plant

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Authorization

Facility ID: 0634005029
Application Number(s): A0044768, A0044901, A0045467
Permit Number: P0110243
Permit Description: 140 MMscfd Gas Processing Plant
Permit Type: Initial Installation
Permit Fee: \$4,800.00
Issue Date: 9/28/2012
Effective Date: 9/28/2012
Expiration Date: 9/28/2022
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Cadiz Gas Plant
43071 Industrial Park Rd
Cadiz, OH 43907

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

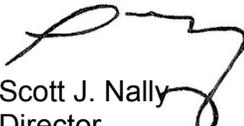
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southeast District Office
2195 Front Street
Logan, OH 43138
(740)385-8501

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0110243
Permit Description: 140 MMscfd Gas Processing Plant

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

- Emissions Unit ID: B001**
Company Equipment ID: B001, 8.27 MMBtu NG Oil Heater
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: B002**
Company Equipment ID: B002, 10 MMbtu NG Stabilization Heater
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F001**
Company Equipment ID: F001, Unpaved Roads & Parking Areas
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P009**
Company Equipment ID: P009, 1.17 Emergency Flare
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P010**
Company Equipment ID: P010, Equipment Maintenance Blowdown
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P011**
Company Equipment ID: P011, 6.51 MMBtu/hr Dehydrator Regenerator Flare
Superseded Permit Number:
General Permit Category and Type: Not Applicable
- Emissions Unit ID: P801**
Company Equipment ID: P801, Fugitive Equipment Leaks
Superseded Permit Number:
General Permit Category and Type: Not Applicable

Group Name: 1480 HP Waukesha Compressor Engi

Emissions Unit ID:	P001
Company Equipment ID:	P001, Compressor Engine #1 - 1480 HP Waukesha L7042 (CM-1206)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P002
Company Equipment ID:	P002, Compressor Engine #2 - 1480 HP Waukesha L7042 (CM-1206)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P003
Company Equipment ID:	P003, Compressor Engine #3 - 1480 HP Waukesha L7042 (CM-1206)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Final Permit-to-Install and Operate

Cadiz Gas Plant

Permit Number: P0110243

Facility ID: 0634005029

Effective Date: 9/28/2012

Emissions Unit ID:	P004
Company Equipment ID:	P004, Compressor Engine #4 - 1480 HP Waukesha L7042 (CM-1206)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: 2370 HP CAT Compressor Engines

Emissions Unit ID:	P005
Company Equipment ID:	P005, Compressor Engine #5 - 2370 HP Caterpillar G3608 engine
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P006
Company Equipment ID:	P006, Compressor Engine #6 - 2370 HP Caterpillar G3608 engine
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

Group Name: 4735 HPCAT Compressor Engines

Emissions Unit ID:	P007
Company Equipment ID:	P007, Compressor Engine #7 - 4735 HP Caterpillar G3616 engine
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P008
Company Equipment ID:	P008, Compressor Engine #8 - 4735 HP Caterpillar G3616 engine
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

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

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a

renewal notice to you approximately six months prior to the expiration date of this permit. However, it is very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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

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

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

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

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

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

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

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

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting¹ a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

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

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

¹Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

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

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

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

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

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

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

B. Facility-Wide Terms and Conditions

Final Permit-to-Install and Operate

Cadiz Gas Plant

Permit Number: P0110243

Facility ID: 0634005029

Effective Date: 9/28/2012

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.
2. The Ohio EPA has determined that this facility is subject to the requirements of 40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines at Area Sources. Although Ohio EPA has determined that this Generally Available Control Technology NESHAP (GACT) applies, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised, that all requirements associated with this rule are in effect and shall be enforced by U.S. EPA. For more information on the area source rules, please refer to the following U.S. EPA website: <http://www.epa.gov/ttn/atw/area/arearules.html>.
3. Specific emissions units contained in this permit are subject to 40 CFR Part 60, Subparts Dc (B002), VVa (P009), (JJJJ (B001, B002, B003 and B004, P005 and P006, P007 and P008), and OOOO (P009 and P801). The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulation (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the appropriate Ohio EPA District office or local air agency.
4. Air contaminant sources that qualify as de minimis under OAC rule 3745-15-05, or are exempt under OAC rule 3745-31-03(A)(1) or (4) are not subject to emission standards established within this permit. Although this permit does not apply to de minimis or exempt sources, emissions from de minimis or exempt sources must be included in the total potential to emit (PTE) calculations for this permit. PTE calculations should include sources such as:
 - a) Condensate stabilizer heaters, B003-B005 (exempt per 3745-15-05),
 - b) Dehydrator reboiler (0.75 MMBtu/hr) heater, B006 (exempt per 3745-15-05 & 3745-31-03(A)(1)(a)),
 - c) Material Loadout, J001 (de minimis per OAC rule 3745-15-05),
 - d) Lube Oil Tanks T001 & T002 (exempt per 3745-31-03(A)(1)(l)).
 - e) Used Oil, Methanol, and Antifreeze Storage Tanks, T003–T005 (exempt per 3745-31-03(A)(1)(l)).
5. The Cadiz Gas Plant must comply with the Used Oil Management Standards of OAC Chapter 3745-279.

C. Emissions Unit Terms and Conditions

1. B001, 8.27 MMBtu natural gas fired Hot Oil Heater

Operations, Property and/or Equipment Description:

8.27 MMBtu natural gas fired Hot Oil Heater

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. g)(1)
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. None.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Nitrogen oxides (NO _x) emissions shall not exceed 0.098 lb/million Btu and 3.55 tons per year. Carbon monoxide (CO) emissions shall not exceed 0.0824 lb/million Btu and 2.98 tons per year. Sulfur dioxide (SO ₂) emissions shall not exceed 0.0006 lb/million Btu and 0.02 tons per year. Particulate emissions (PE) shall not exceed 0.007lb/million Btu and 0.27 ton per year. Visible particulate emissions (PE) shall not exceed 10% opacity from the stack serving this emissions unit, as a 6-minute average.

Final Permit-to-Install and Operate

Cadiz Gas Plant

Permit Number: P0110243

Facility ID: 0634005029

Effective Date: 9/28/2012

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Volatile organic compound (VOC) emissions shall not exceed 0.0054 lb/million Btu and 0.20 tons per year.</p> <p>The requirements of this rule include compliance with OAC rules 3745-17-07(A) and 3745-17-10(B)(1).</p> <p>See b)(2)a. below.</p>
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b. below.
c.	OAC rule 3745-17-07(A)	Visible PE from any stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-10(B)(1)	<p>PE shall not exceed 0.020 lb/million BTU of actual heat input.</p> <p>This emissions limitation is less stringent than the limitation listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.</p>

(2) Additional Terms and Conditions

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, CO, SO₂, VOC and particulate emissions from

this air contaminant source since the uncontrolled potential to emit for NO_x, CO, SO₂, VOC and particulate is less than 10 tons/yr.

c) Operational Restrictions

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

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

e) Reporting Requirements

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

f) Testing Requirements

- (1) Compliance with the emissions limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

NO_x emissions shall not exceed 0.098 lb/million Btu and 3.55 tons per year.

Applicable Compliance Method:

The short term emission rate was established by dividing the emission factor of 100 lbs/million standard cubic feet specified in AP-42 Table 1.4-1 (7/98) by the heating value of natural gas of 1,020 Btu/standard cubic foot.

The annual emission limitation was established by multiplying the lb/million Btu emission rate above by the maximum rated heat input (8.27 MMBtu/hr) and multiplying by maximum hours of operation, (8,760 hours/year), and dividing by 2,000 pounds/ton.

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

If required, NO_x 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:

CO emissions shall not exceed 0.0824 lb/million Btu and 2.98 tons per year.

Applicable Compliance Method:

The short term emission rate was established by dividing the emission factor of 84 lbs/million standard cubic feet specified in AP-42 Table 1.4-1 (7/98) by the heating value of natural gas of 1,020 Btu/standard cubic foot.

The annual emission limitation was established by multiplying the lb/million Btu emission rate above by the maximum rated heat input (8.27 MMBtu/hr) and multiplying by maximum hours of operation, (8,760 hours/year), and dividing by 2,000 pounds/ton.

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

If required, CO 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.

c. Emissions Limitations:

SO₂ emissions shall not exceed 0.0006 lb/million Btu and 0.02 tons per year.

Applicable Compliance Method:

The short term emission rate was established by dividing the emission factor of 0.6 lb/million cubic feet (specified by AP 42 Table 1.4-2 (7/98)) by the heating value of natural gas of 1,020 Btu/standard cubic foot.

The annual emission limitation was established by multiplying the lb/million Btu emission rate above by the maximum rated heat input (8.27 MMBtu/hr) and multiplying by maximum hours of operation, (8,760 hours/year), and dividing by 2,000 pounds/ton.

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

If required, SO₂ emissions shall be determined according to test Methods 1 - 4, and 6 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 Limitations:

PE shall not exceed 0.007lb/million Btu of actual heat input.

PE shall not exceed 0.27 ton per year.

Applicable Compliance Method:

The short term emission rate (as established under OAC 3745-31-05) was established by multiplying an emission factor of 7.6 lb/million standard cubic foot specified in AP-42 Table 1.4-2 (7/98), by the heating value of natural gas of 1,020 Btu/standard cubic foot.

The annual emission limitation was established by multiplying the lb/million Btu emission rate above by the maximum rated heat input (8.27MMBtu/hr) and multiplying by maximum hours of operation, (8,760 hours/year), and dividing by 2,000 pounds/ton.

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", and the procedures specified in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

e. Emissions Limitations:

VOC emissions shall not exceed 0.0054 lb/million Btu and 0.20 tons per year.

Applicable Compliance Method:

The short term emission rate was established by multiplying an emission factor of 0.0054 lb/million BTU calculated by dividing the emission factor of 5.50 lbs/million standard cubic feet specified in AP-42 Table 1.4-2 (7/98), by the heating value of natural gas of 1,020 Btu/standard cubic foot.

The annual emission limitation was established by multiplying the lb/million Btu emission rate above by the maximum rated heat input (8.27 MMBtu/hr) and multiplying by maximum hours of operation, (8,760 hours/year), and dividing by 2,000 pounds/ton.

If required, VOC 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.

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f. Emissions Limitation:

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

Applicable Compliance Method:

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

g) Miscellaneous Requirements

(1) None.

2. B002, 10 MMBtu/hr natural gas fired Stabilization Heater system

Operations, Property and/or Equipment Description:

10 MMBtu/hr natural gas fired Stabilization Heater system

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. g)(1)
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. None.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Nitrogen oxides (NO _x) emissions shall not exceed 0.098 lb/million Btu and 4.29 tons per year. Carbon monoxide (CO) emissions shall not exceed 0.0824 lb/million Btu and 3.61 tons per year. Sulfur dioxide (SO ₂) emissions shall not exceed 0.0006lb/million Btu and 0.03 tons per year. Particulate emissions (PE) shall not exceed 0.007 lb/million Btu and 0.33 ton per year. Volatile organic compound (VOC) emissions shall not exceed 0.0054 lb/million Btu and 0.24 tons per year.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Visible particulate emissions (PE) shall not exceed 10% opacity from the stack serving this emissions unit, as a 6-minute average.</p> <p>The requirements of this rule include compliance with OAC rules 3745-17-07(A) and 3745-17-10(B)(1).</p> <p>See b)(2)a. below.</p>
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b. below.
c.	OAC rule 3745-17-07(A)	Visible PE from any stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-10(B)(1)	<p>PE shall not exceed 0.020 lb/million Btu of actual heat input.</p> <p>This emissions limitation is less stringent than the limitation listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.</p>
e.	<p>40 CFR Part 60, Subpart Dc (40 CFR 60.40c – 60.84c)</p> <p>[In accordance with 40 CFR 60.40c(a), this emissions unit is a steam generating unit for which construction, modification, or reconstruction commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).]</p>	See b)(2)c. and d)(2) below.
f.	40 CFR 60.1-19	See e)(4) below.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265

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

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, CO, SO₂, VOC and particulate emissions from this air contaminant source since the uncontrolled potential to emit for NO_x, CO, SO₂, VOC and particulate is less than 10 tons/yr.

- c. The only fuel combusted in this emissions unit is natural gas. Thus, this emissions unit is not subject to the SO₂ and particulate matter (PM) emissions limitations in 40 CFR 60.42c and 60.43c or the emissions monitoring requirements in 40 CFR 60.46c and 60.47c.

c) Operational Restrictions

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

d) Monitoring and/or Recordkeeping Requirements

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

60.48c(g)(2)	Maintain records of the amount of each fuel combusted during each calendar month; only natural gas fuel combusted
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e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the

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due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

- (3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (4) The permittee shall comply with the applicable monitoring and recordkeeping requirements required under 40 CFR Part 60, Subpart Dc, including the following sections:

60.48c(a) and 60.7	Initial notifications
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f) Testing Requirements

- (1) Compliance with the emissions limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

NO_x emissions shall not exceed 0.098 lb/million Btu and 4.29 tons per year.

Applicable Compliance Method:

The short term emission rate was established by dividing the emission factor of 100 lbs/million standard cubic feet specified in AP-42 Table 1.4-1 (7/98) by the heating value of natural gas of 1,020 Btu/standard cubic foot.

The annual emission limitation was established by multiplying the lb/million Btu emission rate above by the maximum rated heat input (10 MMBtu/hr) and multiplying by maximum hours of operation, (8,760 hours/year), and dividing by 2,000 pounds/ton.

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

If required, NO_x 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:

CO emissions shall not exceed 0.0824 lb/million Btu and 3.61 tons per year.

Applicable Compliance Method:

The short term emission rate was established by dividing the emission factor of 84 lbs/million standard cubic feet specified in AP-42 Table 1.4-1 (7/98) by the heating value of natural gas of 1,020 Btu/standard cubic foot.

The annual emission limitation was established by multiplying the lb/million Btu emission rate above by the maximum rated heat input (10 MMBtu/hr) and multiplying by maximum hours of operation, (8,760 hours/year), and dividing by 2,000 pounds/ton.

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

If required, CO 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.

c. Emissions Limitations:

SO₂ emissions shall not exceed 0.0006 lb/million Btu and 0.03 tons per year.

Applicable Compliance Method:

The short term emission rate was established by dividing the emission factor of 0.6 lb/million cubic feet (specified by AP 42 Table 1.4-2 (7/98)) by the heating value of natural gas of 1,020 Btu/standard cubic foot.

The annual emission limitation was established by multiplying the lb/million Btu emission rate above by the maximum rated heat input (10 MMBtu/hr) and multiplying by maximum hours of operation, (8,760 hours/year), and dividing by 2,000 pounds/ton.

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

If required, SO₂ emissions shall be determined according to test Methods 1 - 4, and 6 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 Limitations:

PE shall not exceed 0.020 lb/million Btu of actual heat input.
PE shall not exceed 0.33 ton per year.

Applicable Compliance Method:

The short term emission rate was (as established under OAC 3745-31-05) established by multiplying an emission factor of 7.6 lb/million standard cubic foot specified in AP-42 Table 1.4-2 (7/98), by the heating value of natural gas of 1,020 Btu/standard cubic foot.

The annual emission limitation was established by multiplying the lb/million Btu emission rate above by the maximum rated heat input (10 MMBtu/hr) and multiplying by maximum hours of operation, (8,760 hours/year), and dividing by 2,000 pounds/ton.

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", and the procedures specified in OAC rule 3745-17-03(B)(10). Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

e. Emissions Limitations:

VOC emissions shall not exceed 0.0054 lb/million Btu and 0.24 tons per year.

Applicable Compliance Method:

The short term emission rate was established by multiplying an emission factor of 0.0054 lb/million BTU calculated by dividing the emission factor of 5.50 lbs/million cubic feet specified in AP-42 Table 1.4-2 (7/98), by the heating value of natural gas of 1,020 Btu/standard cubic foot.

The annual emission limitation was established by multiplying the lb/million Btu emission rate above by the maximum rated heat input (10 MMBtu/hr) and multiplying by maximum hours of operation, (8,760 hours/year), and dividing by 2,000 pounds/ton.

If required, VOC 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.

f. Emissions Limitation:

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

Applicable Compliance Method:

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

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g) Miscellaneous Requirements

(1) None

3. F001, Unpaved Roadways and Parking Areas with a maximum of 8,300 vehicle miles traveled per year.

Operations, Property and/or Equipment Description:

Unpaved Roadways and Parking Areas with a maximum of 8,300 vehicle miles traveled per year.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01.	Fugitive Particulate matter of 10 microns or less (PM10) shall not exceed 0.69 tons/ year. Fugitive Particulate emissions (PE) shall not exceed 2.76 tons/year. No visible PE from unpaved roadways and parking areas except for a period of time not to exceed 3 minutes during any 60-minute observation period. Best available control measures that are sufficient to minimize or eliminate visible PE of fugitive dust (See b)(2)a. through b)(2)f.)

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)g. below.

(2) Additional Terms and Conditions

- a. The permittee shall employ best available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to treat the unpaved roadways and parking areas by application of chemical stabilization/dust suppressants and/or watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- b. 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.
- c. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.
- d. Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas of no visible PE except for a period of time not to exceed six minutes during any sixty-minute observation period.
- e. 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.
- f. 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.

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PE and PM₁₀ emissions from this air contaminant source since the uncontrolled potential to emit for PE and PM₁₀ is less than 10 tons/yr.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

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

<u>unpaved roadways and parking areas</u>	<u>minimum inspection frequency</u>
all roads and parking areas	daily

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

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

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

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

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

- (1) Compliance with the emission limitations in Term b)(1) shall be determined in accordance with the following methods:

a. Emissions Limitations:

Fugitive PM₁₀ emissions shall not exceed 0.69 tons/year.

Fugitive PE emissions shall not exceed 2.76 tons/year.

Applicable Compliance Method:

Compliance with fugitive PE and PM₁₀ limitations shall be determined by using the emission factor equations in Section 13.2.2, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 12/03) for unpaved roadways. Should further updates in AP-42 occur, the most current equations for unpaved roads shall be used. These emission limits were based on a maximum of 8,300 vehicle miles traveled per year, and an 80% control efficiency for PE and PM₁₀. Initial compliance has been determined utilizing inputs provided by the permittee in their application as follows:

Unpaved Roadways (PM₁₀):

$$EF = ((k \times (s/12)^a \times (W/3)^b) \times (365-p))/365$$

Where:

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

k (lb/VMT) = 1.5

a = 0.9

b = 0.45

s = % surface material silt content = 4.3

W = mean vehicle weight (tons) = 18.55

p = number of rain days per year >0.01 in. = 140

Therefore, EF = 0.83 lb/VMT

Maximum travel = 8,300 VMT/year

$$(8,300 \text{ VMT/year})(0.83\text{lb/VMT})(1 \text{ ton}/2,000 \text{ lbs}) = 3.45 \text{ TPY uncontrolled PM}_{10}$$

Assume 80% control efficiency for roadway controls.

$$(3.45)(1-0.80) = 0.69 \text{ TPY controlled PM}_{10}$$

Unpaved Roadways (PE):

$$EF = ((k \times (s/12)^a \times (W/3)^b) / ((365-p)/365))$$

Where:

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

k (lb/VMT) = 4.9

a = 0.7

b = 0.45

s = % surface material silt content = 4.3

W = mean vehicle weight (tons) = 18.55

p = number of rain days per year >0.01 in. = 140

Therefore, EF = 3.34lb/VMT

Maximum travel = 8,300 VMT/year

$$(8,300 \text{ VMT/year})(3.34\text{lb/VMT})(1 \text{ ton}/2,000 \text{ lbs}) = 13.8 \text{ TPY uncontrolled PE}$$

Assume 80% control efficiency for roadway.

$$(13.8)(1-0.80) = 2.76 \text{ TPY controlled PE}$$

b. Emission Limitation:

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

Applicable Compliance Method:

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

g) Miscellaneous Requirements

- (1) None.

4. P009, 1.17 MMBtu/hr Emergency Flare with a maximum heat input capacity of no more than 12,276 MMBtu/hr and operated at 1.17 MMBtu/hr except during an emergency for 98% control of VOC emissions from pressurized process equipment.

Operations, Property and/or Equipment Description:

1.17MMBtu/hr Emergency Flare with a maximum heat input capacity of no more than 12,276 MMBtu/hr and operated at 1.17 MMBtu/hr except during an emergency for 98% control of VOC emissions from pressurized process equipment.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. g)(1).

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Nitrogen oxides (NO _x) emissions shall not exceed 0.114lb/hr and 0.50 ton per year. Carbon monoxide (CO) emissions shall not exceed 0.096lb/hr and 0.42 ton per year. Sulfur dioxide (SO ₂) emissions shall not exceed 0.000688lb/hr and 0.0039 ton per year. Volatile organic compound (VOC) emissions shall not exceed 0.0063 lb/hr and 0.028ton per year. The requirements of this rule include

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		compliance with 40 CFR Part 60, Subpart OOOO. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b. below.
c.	40 CFR Part 60, Subparts A and OOOO (40 CFR 60.18, 60.5360-5430) [In accordance with 40 CFR 60.5412(a), this emissions unit consists of a flare and closed vent system used to control emissions from storage vessels in the oil and natural gas production segment.]	See c)(1), d(1), and e(2) below.

(2) Additional Terms and Conditions

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

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, CO, SO₂, VOC, and particulate emissions from this air contaminant source since the uncontrolled potential to emit for NO_x, CO, SO₂, VOC and particulate emissions are less than 10 tons/yr.

c) Operational Restrictions

- (1) The permittee shall comply with the applicable restrictions required under 40 CFR Part 60, Subparts A and OOOO, including the following sections:

60.5395(a), 60.5410(e)(3), 60.5415(e)(1)	Operate the flare to achieve a 98% reduction of emissions of VOC from the storage vessels.
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60.5395(b), 60.5410(e)(4), and 60.5411(b)	Equip the storage tanks with a cover connected through a closed vent system to the flare. The cover and all openings in the cover must form a continuous barrier over the entire surface area of the liquid in the storage vessel and must be secured in a closed, sealed position whenever material is stored in the storage vessels except as provided by rule.
60.5411(a)(1), 60.5412(b)(1), and 60.18(e)	Operate closed vent systems and control devices used to comply with the provisions of 60.5395 at all times when emissions may be vented to them.
60.5411(a)(2)	Design and operate the closed vent system with no detectable emissions.
60.5411(a)(3)	Any valves associated with the closed vent system that are capable of diverting all or a portion of the emissions away from the flare must be equipped with bypass flow monitors or must be secured in the non-diverting position as described by rule.
60.5416(b)(9), (10), (11), (12)	Repair all leaks detected for the closed vent system within 15 days with a first attempt at repair occurring within 5 days of detection except as provided by rule (e.g., delay of repair, unsafe to inspect, difficult to inspect).
60.5412(a)(3) and 60.18(c)(1)	Design and operate the flare with no visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
60.5412(a)(3) and 60.18(c)(2)	Operate the flare with a flame present at all times.
60.5412(a)(3), 60.18(c)(3), 60.18(c)(3)(i), 60.18(f)(4) and (5)	Adhere to the diameter, hydrogen content, and exit velocity specifications in 60.18(c)(3)(i)(A). Calculate exit velocities as specified in 60.18(f)(4) and (5).*
60.5412(a)(3), 60.18(c)(3), 60.18(c)(3)(ii), 60.18(c)(4), 60.18(f)(3), (4), and (5)	Adhere to the minimum net heating value of gas specified in 60.18(c)(3)(ii) and maximum tip velocity specifications in 60.18(c)(4). Calculate heat content as specified in 60.18(f)(3). Calculate exit velocities as specified in 60.18(f)(4) and (5).*

* The permittee may choose to comply with any alternative standards provided in 40 CFR 60, Subparts A and OOOO.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR Part 60, Subparts A and OOOO, including the following sections:

60.5417(d)(1)(iii) and 60.5415(e)(2)(vii)(B).	Install, calibrate, operate, and maintain a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.
60.5417(c)(1)	Detect and record the presence of a flare flame at least once every hour.
60.5417(c)(2), 60.18(d), 60.18(f)(2)	Install, calibrate, operate, and maintain the heat sensing monitoring device in accordance with a site specific monitoring plan including the information required by rule.
60.5417(c)(3) and (4)	Conduct a continuous parameter monitoring system equipment performance check, system accuracy audit, or other audit procedure as specified in the site-specific monitoring plan at least once every 12 months. Conduct performance evaluations of the continuous parameter monitoring systems as specified in the site-specific monitoring plan.
60.5416(a)(1)	Conduct an initial inspection of all closed vent system joints, seams, or other connections that are permanently or semi-permanently sealed to demonstrate that the system operates with no detectable emissions. Conduct subsequent annual visual inspections for defects. Any defective components that are replaced must be inspected to demonstrate that these components operate with no detectable emissions.
60.5416(a)(2)	Conduct initial and annual inspections of all closed vent system components other than those described under 60.5416(a)(1) to demonstrate that that system operates with no detectable emissions. Also conduct annual visual inspections for defects.
60.5416(a)(3)	Conduct initial and annual inspections of the

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	storage vessel covers to identify any defects.
60.5416(a)(4)	Operate the bypass valve flow monitors to collect a reading at least once every 15 minutes or visually inspect all bypass valves secured in the non-diverting position at least monthly to verify that valve remains in the non-diverting position.
60.5416(b)(1) through (8)	Conduct inspections of closed vent systems to detect leaks according to USEPA Method 21 and as provided by rule. The condition of no detectable emissions is defined as an organic concentration value less than 500 ppmv.
60.5420(c)(5)	Maintain required records for storage vessels.
60.5420(c)(6)	Maintain required records for inspections of closed vent systems.
60.5420(c)(7)	Maintain required records for inspections of storage vessel covers.
60.5420(c)(8)	Maintain required records for inspections of bypass valves.
60.5420(c)(9)	Maintain required records for leaks and repairs of closed vent systems.
60.5420(c)(11)	Maintain required records for continuous parameter monitoring systems.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (3) The permittee shall comply with the applicable reporting requirements required under 40 CFR Part 60, Subparts OOOO and A, including the following sections:

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60.5420(a)(1)	Initial notifications are not required for storage vessels.
60.5410(e)(8), 60.5420(b)(1), and 60.5420(b)(6)	Submit the required information for storage vessels in the initial annual report within 30 days of the end of the initial compliance period and in the subsequent reports due the same date each year as the initial annual report.
60.5420(b)(7)	Submit the results of performance testing to USEPA's WebFIRE database within 60 days of completing each performance test.

f) Testing Requirements

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

a. Emissions Limitations:

NO_x emissions shall not exceed 0.114 lb/hr and 0.50ton per year.

Applicable Compliance Method:

Compliance with the NO_x emissions limitations shall be based upon the following calculations using the inputs provided in the permittee's application:

$$\begin{aligned} \text{NO}_x \text{ (lbs/hr)} &= \text{pilot light/purge gas heat input (million Btu/hr)} \times \text{NO}_x \text{ emissions factor (lb/million Btu)} \\ &= 1.17 \text{ million Btu/hr} \times 0.098 \text{ lb/million Btu} \\ &= 0.114 \text{ lb/hr} \end{aligned}$$

Where:

Maximum hourly pilot light/purge gas heat input = 1.17 million Btu/hr

NO_x EF (pilot light/purge gas and flared material) = 0.098 lb/million Btu (AP-42, Section 1.4, Table 1.4-1, 2, 3).

If required, NO_x 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.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\text{NO}_x \text{ (ton/yr)} = \text{Hourly NO}_x \text{ emission rate (lb/hr)} \times 8,760 \text{ (hr/yr)} / 2,000 \text{ (lb/ton)}$$

$$\begin{aligned} &= 0.114 \text{ (lb/hr)} \times 8,760 \text{ (hr/yr)} / 2,000 \text{ (lb/ton)} \\ &= 0.50 \text{ ton per year.} \end{aligned}$$

- b. Emissions Limitations:
CO emissions shall not exceed 0.096 lb/hr and 0.42 ton per year.

Applicable Compliance Method:

Compliance with the CO emissions limitations shall be based upon the following calculations using the inputs provided in the permittee's application:

$$\begin{aligned} \text{CO (lbs/hr)} &= \text{pilot light/purge gas heat input (million Btu/hr)} \times \text{CO} \\ &\quad \text{emissions factor (lb/million Btu)} \\ &= 1.17 \text{ million Btu/hr} \times 0.08235 \text{ lb/million Btu} \\ &= 0.096 \text{ lb/hr} \end{aligned}$$

Where:

Maximum hourly pilot light/purge gas heat input = 1.17 million Btu/hr

CO EF (pilot light/purge gas and flared material) = 0.08235 lb/million Btu (AP-42, Section 1.4, Table 1.4-1, 2, 3).

If required, CO 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.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned} \text{CO(ton/yr)} &= \text{Hourly CO emission rate (lb/hr)} \times 8,760 \text{ (hr/yr)} / 2,000 \\ &\quad \text{(lb/ton)} \\ &= 0.096 \text{ (lb/hr)} \times 8,760 \text{ (hr/yr)} / 2,000 \text{ (lb/ton)} \\ &= 0.42 \text{ ton per year.} \end{aligned}$$

- c. Emissions Limitations:
SO₂ emissions shall not exceed 0.000688lb/hr and 0.0039 ton per year.

Applicable Compliance Method:

Compliance with the SO₂ emissions limitations shall be based upon the following calculations using the inputs provided in the permittee's application:

$$\begin{aligned} \text{SO}_2 \text{ (lbs/hr)} &= \text{pilot light/purge gas heat input (million Btu/hr)} \times \text{SO}_2 \\ &\quad \text{emissions factor (lb/million Btu)} \\ &= 1.17 \text{ million Btu/hr} \times 0.000588 \text{ lb/million Btu} \\ &= 0.000688 \text{ lbs/hr} \end{aligned}$$

Where:

Maximum hourly pilot light/purge gas heat input = 1.17 million Btu/hr

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SO₂ EF (pilot light/purge gas and flared material) = 0.000588lb/million Btu calculated using the standard natural gas sulfur content provided in AP-42, Section 1.4.

If required, SO₂ emissions shall be determined according to test Methods 1 - 4, and 6 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.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned} \text{SO}_2(\text{ton/yr}) &= \text{Hourly SO}_2 \text{ emission rate (lb/hr)] X 8,760 (hr/yr) / 2,000 (lb/ton)} \\ &= 0.000688 \text{ (lb/hr) X 8,760 (hr/yr) / 2,000 (lb/ton)} \\ &= 0.0039 \text{ ton per year.} \end{aligned}$$

d. Emissions Limitations:

VOC emissions shall not exceed 0.0063 lb/hr and 0.028 ton per year.

Applicable Compliance Method:

Compliance with the VOC emissions limitations shall be based upon the following calculations using the inputs provided in the permittee's application:

$$\begin{aligned} \text{VOC (lbs/hr)} &= \text{pilot light/purge gas heat input (million Btu/hr) X VOC emissions factor (lb/million Btu)} \\ &= (1.17 \text{ million Btu/hr X 0.00539lb/million Btu)} \\ &= 0.0063\text{lbs/hr} \end{aligned}$$

Where:

Maximum hourly pilot light/purge gas heat input = 1.17 million Btu/hr

VOC EF (pilot light/purge gas) = 0.00539lb/million Btu (AP-42 Table 1.4-2, 7/98)

If required, VOC 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.

Compliance with the annual emissions limitation shall be demonstrated by the following calculation:

$$\begin{aligned} \text{VOC(ton/yr)} &= \text{Hourly VOC emission rate (lb/hr)] X 8,760 (hr/yr) / 2,000 (lb/ton)} \\ &= 0.0063 \text{ (lb/hr) X 8,760 (hr/yr) / 2,000 (lb/ton)} \\ &= 0.028 \text{ ton per year} \end{aligned}$$

- e. Emissions Limitations:
The flare shall be designed and operated with no visible emissions, except for a total of five minutes during any two consecutive hours.

Applicable Compliance Method:

Visible particulate emissions shall be determined according to USEPA Method 22. See f)(2).

- (2) Performance testing shall be conducted as required in 40 CFR Part 60, Subpart A and OOOO pursuant to 40 CFR 60.18(f)(1), 60.5410(e)(5), and 60.5413(a)(1). The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 180 days after initial startup of such facility.
- b. The emissions testing shall be conducted to demonstrate compliance with the visible emission limitations for the flare in accordance with the requirements of 40 CFR 60.5413(a)(1).
- c. The following test method shall be employed to demonstrate compliance with the allowable emission rate: visible emissions - Method 22 of 40 CFR 60, Appendix A.
- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- e. No later than thirty (30) days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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

g) Miscellaneous Requirements

- (1) None.

5. P010, Equipment Maintenance Blowdown emissions where it is not feasible to vent to a flare for control; based on a maximum of 4 events per year equal to approximately 13.1 tons total.

Operations, Property and/or Equipment Description:

Equipment Maintenance Blowdown emissions where it is not feasible to vent to a flare to control emissions; based on 4 events per year(of P001 thru P008 + emergency shut down) equal to 13.1 tons per year total.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. g)(1)

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC section 3704.03(T)	Fugitive volatile organic compound (VOC) emissions shall not exceed 13.1 tons per rolling, 12-month period. See c)(1) below.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

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

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain the following records on a monthly basis:
 - a. The date, number and type of each maintenance blowdown event;
 - b. Total volume of gas emitted from each maintenance blowdown event; and
 - c. Total volume of gas emitted from all maintenance blowdown events as a rolling, 12-month total.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

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

- a. Emissions Limitation:

Fugitive VOC emissions shall not exceed 13.1 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the VOC emissions limitation shall be based upon the following calculation using the inputs provided in the permittee's application and the recordkeeping requirements in d)(1):

$$\begin{aligned} \text{VOC (tons/yr)} = & \\ & [(\text{VOC estimate for P001-P004 blowdowns} \times \# \text{ of blowdown events per year}) \\ & + (\text{VOC estimate for P005-P006 blowdowns} \times \# \text{ of blowdown events per year}) \\ & + (\text{VOC estimate for P007-P008 blowdowns} \times \# \text{ of blowdown events per year}) \\ & + (\text{VOC estimate for ESDblowdowns} \times \# \text{ of ESDblowdown events per year}) \\ & + (\text{HAP estimate for ESD blowdowns} \times \# \text{ of ESD blowdown events per year})] \\ & \times 1 \text{ ton}/2,000 \text{ pounds} \end{aligned}$$

Where:

VOC emissions estimate for each P001-P004blowdown event = 38lbs/event
VOC emissions estimate for each P005-P006 blowdown event = 61lbs/event

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VOC emissions estimate for each P007-P008blowdown event = 122lbs/event
VOC emissions estimate for each ESD blowdown event =6,033lbs/event
HAP emissions estimate for each ESD blowdown event = 57.5lbs/event

g) Miscellaneous Requirements

(1) None.

6. P011 – 6.51 MMBtu/hr Dehydrator Regenerator Flare with 98% control ofVOC emissions from Dehydrator process.

Operations, Property and/or Equipment Description:

6.51 MMBtu/hr Dehydrator Regenerator Flare with 98% control ofVOC emissions from Dehydrator process.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. g)(1)

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) **Applicable Emissions Limitations and/or Control Requirements**

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Carbon Monoxide (CO) emissions shall not exceed 0.55 lb/million Btu.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	<p>Nitrogen oxide (NO_x) emissions shall not exceed 0.138lb/million Btu and 3.93 tons per year.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.000476lb/million Btu and 0.01 tons per year.</p> <p>Particulate emissions (PE) shall not exceed 0.16 ton per year.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 0.00539lb/million Btu from the pilot & purge gas and 1.89 lb/hr from fugitive losses.</p>

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Total VOC Emissions shall not exceed 8.45 tons per year. See b)(2)a. below.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b. below.
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 c)(1), d(1), and e(3) below.
e.	40 CFR 63.11(b)(4)	No visible emissions from the flare except for 5 minutes during any 2 consecutive hours.

(2) Additional Terms and Conditions

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

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

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_x, SO₂, VOC and particulate emissions from this air contaminant source since the uncontrolled potential to emit for SO₂, VOC and particulate emissions is less than 10 tons/yr.

c) Operational Restrictions

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- (1) The permittee shall comply with the applicable reporting requirements required under 40 CFR Part 63, Subparts HH and A, including the following sections:

63.764(e)	Comply with the operational restrictions unless if not qualified for dehydrator exemption.
63.762	Startup / Shutdown procedures.
63.764(c)(3)	Equipment Leak requirements.
63.765	Glycol Dehydration Unit Process Vent Standards
63.766	Storage Vessel Standards
63.769	Equipment Leak Standards
63.771	Control Equipment Standards

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall comply with the applicable reporting requirements required under 40 CFR Part 63, Subparts HH and A, including the following sections:

63.760(a)	Record annual facility natural gas or hydrocarbon liquid throughput
63.773	Inspection and Monitoring Requirements
63.774	Record Keeping Requirements

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (3) The permittee shall comply with the applicable reporting requirements required under 40 CFR Part 63, Subparts HH and A, including the following sections:

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63.760(a)	<p>Annual facility natural gas or hydrocarbon liquid throughput.</p> <p>The actual annual average flow rate of natural gas to the glycol dehydration unit; the actual annual average emissions of benzene; and shall identify the method used to demonstrate compliance.</p> <p>Where a flare is used to control the dehydration still vent, all periods of time during which the automatic flare ignition system was not functioning properly or the flare was not maintained as required in this permit. The reports shall include the date, time, and duration of each such period.</p> <p>When a condenser (BTEX elimination system) is used to control the dehydration still vent, a report describing all periods of time when the continuous temperature monitoring device that continuously monitors and records the condenser vapor outlet temperature is not working and process gas is being vented to the condenser.</p> <p>If this facility is using the annual average flow rate of natural gas to the TEG dehydration unit exemption, a report describing the calculation/measurement of the actual annual average natural gas flow rate.</p>
63.764(b)	Submit reports to USEPA
63.765	Reporting Requirements
63.772(a)(1)	<p>If this facility is using the actual average benzene emissions from the TEG dehydration unit exemption, a report describing the results of either the GRI-GLYCalc™ model or directly measuring benzene using the appropriate methods identified in 40 CFR 63.772(a)(1).</p>

f) Testing Requirements

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

a. Emissions Limitations:

CO emissions shall not exceed 0.55 lb/million Btu.

Applicable Compliance Method:

The emissions limitation for CO is based on using the AP-42 emission factor of 0.55 lb CO/MMBtu(*from TNRCC RG-109, Table 4 for other flares combusting low-level Btu waste streams*).

If required, CO 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.

b. Emissions Limitations:

NOx emissions shall not exceed 0.138 lb/million Btu and 3.93 tons per year.

Applicable Compliance Method:

The emissions limitation for NOx is based on using the AP-42 emission factor of 0.138lbNOx/MMBtu(*from TNRCC RG-109, Table 4 for other flares combusting low-level Btu waste streams*)and using the estimated burner rating of 6.51MMBtu/hr. Estimated NOx emissions shall be determined by the following calculation:

$$0.138 \text{ lbNOx/million Btu} \times 6.51 \text{ million Btu/hr} = 0.898 \text{ lbNOx /hr}$$

$$0.898 \text{ lb NOx/hr} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} = 3.93 \text{ tons NOx/year.}$$

c. Emission Limitations:

Sulfur dioxide (SO₂) emissions shall not exceed 0.000476 lb/million Btu and 0.01 tons per year.

Applicable Compliance Method:

The SO₂ emissions limitation is based on a standard sulfur content of 2,000 gr/MMscf. (AP-42 Section 1.4, Table 1.4-2)

Compliance with the ton per year SO₂ emissions limitation shall be determined by the following calculations:

$$2,000 \text{ gr/MMscf} / 7,000 \text{ gr/lb} / 32 \text{ lb/lbmole} \times 64 \text{ lb/lbmole} / 1,200 \text{ Btu/scf} \times 6.51 \text{ MMBtu/hr} = 0.0031 \text{ lb SO}_2\text{/hr}$$

0.0031lb SO₂/hr x 8,760 hrs/year x 1 ton/2,000 lbs = 0.01 tons SO₂/year.

d. Emission Limitation:

Volatile organic compound (VOC) emissions shall not exceed 0.00539 lb/million BTU from the pilot & purge gas and 1.89 lb/hr from the pilot & purge gas and 1.89 lb/hr from fugitive losses.

Total VOC emissions shall not exceed 8.45 tons per year.

Applicable Compliance Method:

The emissions limitation for VOC is based on using the AP-42 emissions factor of 1.92lb of VOCs/MMBtu from Chapter 1.4 for Natural Gas Combustion, Table 1.4-2 "Emission Factors for Natural Gas Combustion" and using the estimated burner rating of 6.51MMBtu/hr. Estimated VOC emissions shall be determined by the following calculation:

Pilot & Purge gas + 2% fugitive Dehydrator lose = 8.45 tons VOC/year

5.39E-03lb VOC/million Btu x 6.51million Btu/hr = 0.35lb VOC/hr,

+ 1.89lb VOC/hr x 8760 hr/yr x 1 ton/2000 lbs = 8.45 tons VOC/year.

e. Emission Limitation

There shall be no visible emissions from the flare, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

Applicable Compliance Method

If required, Compliance with the visible emissions limitation shall be determined in accordance with U.S. EPA Method 22 in Appendix A of 40 CFR Part 60.

- (2) The permittee shall comply with the applicable reporting requirements required under 40 CFR Part 63, Subparts HH and A, including the following sections:

63.772	Test Methods, compliance procedures and compliance demonstrations.
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g) Miscellaneous Requirements

- (1) None.

7. P801, Equipment leaks from various components, including connectors, flanges, compressors, open ended lines, pump seals, and valves.

Operations, Property and/or Equipment Description:

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

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. g)(1)

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Fugitive emissions of Volatile Organic Compounds (VOC) shall not exceed 4.46 tons per rolling, 12-month period. The requirements of this rule include compliance with 40 CFR 60, Subpart OOOO, and rule OAC 3745-31-05(E). See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b. below.
c.	40 CFR Part 60, Subparts A and OOOO (40 CFR 60.5360 through 60.5430) [In accordance with 40 CFR 60.5365, this emissions unit includes reciprocating compressors and	See c)(1), and d)(1) below.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	pneumatic controllers located between the wellhead and the point of custody transfer constructed after August 23, 2011.]	

(2) Additional Terms and Conditions

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

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

c) Operational Restrictions

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

60.5385(a) and 60.5415(c)(3)	Replace the reciprocating compressor rod packing prior to completing 26,000 hours of operation since startup or the last rod packing replacement, or within 36 months of startup or the last rod packing replacement.
60.5390(c), 60.5410(d)(3) and (4), and 60.5415(d)(1)	Operate each pneumatic controller at a bleed rate of no more than 6 standard cubic feet per hour and label (i.e., tag) the controller with the information required by rule.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall comply with the applicable monitoring and recordkeeping requirements required under 40 CFR Part 60, Subpart OOOO, including the following sections:

60.5410(c)(1)	During the initial compliance period, continuously monitor the number of hours of operation or track the number of months since the last rod packing replacement for reciprocating compressors.
60.5415(c)(1)	For reciprocating compressors, continuously monitor the number of hours of operation or track the number of months since initial startup or since the date of the most recent compressor rod packing replacement, whichever is later.
60.5410(c)(4), 60.5415(c)(2), and 60.5420(c)(3)	Maintain records of the required information for reciprocating compressors.
60.5410(d)(6), 60.5415(d)(3), and 50.5420(c)(4)	Maintain records of the required information for pneumatic controllers.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (3) The permittee shall comply with the applicable reporting requirements required under 40 CFR Part 60, Subparts OOOO and A, including the following sections:

60.7(a), 60.5410(c)(2), and 60.5420(a)	Submit for reciprocating compressors an initial notification of the date construction of the affected facility commenced and the actual date of initial startup of the affected facility
60.5420(a)(1)	Initial notifications are not required for pneumatic controllers.

60.5410(c)(3), 60.5415(c)(2), and 60.5420(b)	Submit the required information for reciprocating compressors in the initial annual report within 30 days of the end of the initial compliance period and in the subsequent reports due the same date each year as the initial annual report.
60.5410(d)(5), 60.5415(d)(2) and 60.5420(b)	Submit the required information for pneumatic controllers in the initial annual report within 30 days of the end of the initial compliance period and in the subsequent reports due the same date each year as the initial annual report.

f) Testing Requirements

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

a. Emissions Limitation:

Fugitive emissions of VOC shall not exceed 4.46 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emissions limitation shall be demonstrated by the following calculation based on the emissions factors (lb/hr/component) provided in Table 2-4 of U.S. EPA's Protocol for Equipment Leak Emission Estimates (11/95) for components in gas, light oil, and water/oil service:

$$\begin{aligned}
 \text{VOC} = & [(\# \text{ of valves in gas service} \times \text{gas service valve EF}) \\
 & + (\# \text{ of valves in light oil service} \times \text{light oil service valve EF}) \\
 & + (\# \text{ of valves in water/oil service} \times \text{water/oil service valve EF}) \\
 & + (\# \text{ of pumps in gas service} \times \text{gas service pump EF}) \\
 & + (\# \text{ of pumps in light oil service} \times \text{light oil service pump EF}) \\
 & + (\# \text{ of pumps in water/oil service} \times \text{water/oil service pump EF}) \\
 & + (\# \text{ of connectors/flanges in gas service} \times \text{gas service connector/flange EF}) \\
 & + (\# \text{ of connectors/flanges in light oil service} \times \text{light oil service connector/flange EF}) \\
 & + (\# \text{ of connectors/flanges in water/oil service} \times \text{water/oil service connector/flange EF})
 \end{aligned}$$

+ (# of open-ended lines in gas service X gas service open-ended line EF)

+ (# of other points in gas service X gas service other equipment EF)] , then

X 0.15 VOC wt% X 8,760 hrs/yr X 1 ton/2,000 lbs ≤ 4.46 tons per rolling, 12-month period.

Where:

Valve EFs = 0.694 lb/hr/source for gas service, and 4.27lb/hr/source for light oil service;

Pump Seal EFs = 0.0E-00lb/hr/source for gas service, and 0.0573lb/hr/source for light oil service;

Connector/flange EFs = 0.185lb/hr/source for gas service, and 1.041lb/hr/source for light oil service;

Open-ended line EFs = 0.0lb/hr/source for gas service

Other* EFs = 0.136lb/hr/source for gas service

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

* As an alternative to using the above emissions factors to calculate VOC emissions, the facility may use facility specific VOC information for site specific emissions factors.

g) Miscellaneous Requirements

(1) None.

8. Emissions Unit Group -1480 HP(11.39 MMBtu/hr) Waukesha NG Compressor Engines: P001,P002,P003,P004.

EU ID	Operations, Property and/or Equipment Description
P001	Compressor Engine #1 - 1480 HP (11.39 MMBtu/hr) Waukesha L7042 (CM-1206-01) - natural gas-fired four-stroke rich burn internal combustion engine rated equipped with a three-way oxidation catalyst controlling CH ₂ O, CO, NO _x , & VOCs by 80, 97, 98.5& 60 percent respectively.
P002	Compressor Engine #2 - 1480 HP (11.39 MMBtu/hr) Waukesha L7042 (CM-1206-02) - natural gas-fired four-stroke rich burn internal combustion engine rated equipped with a three-way oxidation catalyst controlling CH ₂ O, CO, NO _x , & VOCs by 80, 97, 98.5& 60 percent respectively.
P003	Compressor Engine #3 - 1480 HP (11.39 MMBtu/hr) Waukesha L7042 (CM-1206-03) - natural gas-fired four-stroke rich burn internal combustion engine rated equipped with a three-way oxidation catalyst controlling CH ₂ O, CO, NO _x , & VOCs by 80, 97, 98.5& 60 percent respectively.
P004	Compressor Engine #4 - 1480 HP (11.39 MMBtu/hr) Waukesha L7042 (CM-1206-04) - natural gas-fired four-stroke rich burn internal combustion engine rated equipped with a three-way oxidation catalyst controlling CH ₂ O, CO, NO _x , & VOCs by 80, 97, 98.5& 60 percent respectively.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. d)(3).

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Nitrogen oxide (NO _x) emissions from the stack serving this emissions unit shall not exceed 2.86tons/year.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Carbon monoxide (CO) emissions from the stack serving this emissions unit shall not exceed 3.57tons/year.</p> <p>Volatile Organic compounds (VOC) emissions from the stack serving this emissions unit shall not exceed 2.43tons/year.</p> <p>Visible particulate emissions (PE) shall not exceed 10% opacity from the stack serving this emissions unit, as a 6-minute average.</p> <p>PE emissions from the stack serving this emissions unit shall not exceed 0.22 lb/hr and 0.97 ton/ year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)and OAC rule 3745-17-11.</p> <p>See b)(2)a. below.</p>
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b. below.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)c. below.
d.	<p>40 CFR Part 60, Subpart JJJJ (40 CFR 60. 4230 – 60.4248)</p> <p>[In accordance with 40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1, this emissions unit is a 1480hp, natural gas-fired, stationary spark internal combustion engine manufactured after January 1, 2009 that is located at a new natural gas compressor station and is subject to the emission limitations and control measures specified in this section.]</p>	<p>NOx emissions shall not exceed 1.0 g/hp-hr and 82ppmvd at 15% oxygen (O₂).</p> <p>CO emissions shall not exceed 2.0 g/hp-hr and 270 ppmvd at 15% O₂.</p> <p>VOC emissions shall not exceed 0.7 g/hp-hr and 60ppmvd at 15% O₂.</p> <p>[40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1]</p>
e.	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.
f.	OAC rule 3745-17-11(B)(5)(b)	PE shall not exceed 0.062 pound/million

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

(2) Additional Terms and Conditions

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

Permit-to-install and operate P0110243 for this air contaminant source takes into account the following voluntary restriction (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3):

- i. The emissions from the engine are vented to an oxidation catalyst controlling CH₂O, CO, NO_x, and VOCs by 80, 97, 98.5 and 60 percent respectively, at all times the emissions unit is in operation.
- ii. NO_x emissions shall not exceed 2.86 tons/year.

iii. CO emissions shall not exceed 3.57 tons/year.

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

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

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

60.4236(b)	Installation deadlines
60.4243(b)	Compliance demonstration

c) Operational Restrictions

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

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

60.4234	Duration of compliance with emission standards
60.4243(b)	Maintenance requirements
60.4243(e)	Alternative fuel
60.4243(f)	Performance testing
60.4243(g)	AFR controllers

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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

60.4245(a) and (d)	Notification, record keeping, and reporting requirements
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- (3) The permit to install and operate for this emissions unit (P001, P002, P003, P004, P005, P006, P007 and P008) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install and operate application. The applicant performed modeling for the toxic pollutant(s) emitted at over a ton per year using the AERMOD model – version 12060. The predicted 1-hour maximum ground-level concentration result(s) from the use of the AERMOD model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated using AERMOD. The following summarizes the results of the modeling for the “worst case” pollutant(s):

Pollutant: Acetaldehyde (CH₃CHO) and Formaldehyde (CH₂O)

TLV (ug/m³): 272

Maximum Hourly Emission Rate (lbs/hr): 0.42

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 2.36

MAGLC (ug/m³): 6.47

The permittee, has demonstrated that emissions of Acetaldehyde (CH₃CHO) and Formaldehyde (CH₂O), from emissions units P001, P002, P003, P004, P005, P006, P007 and P008 is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the “Air Toxic Policy” is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the “Air Toxic Policy” will still be satisfied. If, upon evaluation, the permittee determines that the “Air Toxic Policy” will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the “Air Toxic Policy” include the following:

- a. Changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists’ (ACGIH’s) handbook entitled “TLVs and BEIs, Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices”;
- b. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

- c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the “Air Toxic Policy” will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a “modification” under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a “modification” under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the “Air Toxic Policy:”

- i. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- ii. Documentation of its evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and
- iii. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the “Air Toxic Policy” for the change.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through Ohio EPA’s e-business center: Air Services online web portal; or they may be mailed as a hard copy to the Ohio EPA, Southeast District Office.
- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (4) Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. construction date (no later than 30 days after such date);
 - b. actual start-up date (within 15 days after such date); and
 - c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
50 West Town Street, Suite 700
P. O. Box 1049
Columbus, Ohio 43216-1049

and

Southeast District Office of the Ohio EPA
Division of Air Pollution Control
2195 Front Street, Logan, Ohio 43138.

- (5) The permittee shall submit notifications and reports to the Ohio EPA, Southeast District Office as required pursuant to 40 CFR Part 60, Subpart JJJJ, per the following sections:

60.4243(b)(2)(ii) and 60.4245	Keeping of maintenance plan and records of maintenance conducted on the engine
60.4245(a)	Maintenance of notifications and supporting documentation
60.4245(b)	Keep records of the hours of operation of the engine recorded through a non-resettable hour meter
60.4245(c)	Must submit an initial notification

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. Purchasing an engine certified according to procedures specified in 40 CFR Part 60, Subpart JJJJ for the same model year and demonstrating compliance according to one of the methods specified in 40 CFR 60.4243(b).
 - i. If the permittee operates and maintains the certified, stationary, SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the permittee must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required.
 - ii. If the permittee does not operate and maintain the certified, stationary, SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine, and the permittee must keep a

maintenance plan and records of conducted maintenance consistent with good air pollution control practices for minimizing emissions. In addition, the permittee must conduct an initial performance test within 1 year of engine startup.

- b. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in 40 CFR 60.4233(e) and according to the requirements specified in 40 CFR 60.4244, as applicable. The permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practices for minimizing emissions. In addition, the permittee must conduct an initial performance test. See 40 CFR 60.4243(b)(2)(ii).

- c. Emissions Limitation:

NO_x emissions shall not exceed 2.86 ton/year.

Applicable Compliance Methods:

The short term emission rate was determined by multiplying 0.20g/bhp-hr, the emission factor specified in the manufacturer's engine specification sheet obtained from Caterpillar, by 1,480 bhp, the power output rating of this unit, and dividing by 453.59 g/lb equals 0.65257 lb/hr(as submitted in application).

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

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

- d. Emissions Limitation:

CO emissions shall not exceed 3.57 ton/year.

Applicable Compliance Methods:

The short term emission rate was determined by multiplying 0.25 g/bhp-hr, the emission factor specified in the manufacturer's engine specification sheet obtained from Caterpillar, by 1,480 bhp, the power output rating of this unit, and dividing by 453.59 g/lb equals 0.8157 lb/hr (as submitted in application).

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

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

- e. Emissions Limitation:

VOC emissions shall not exceed 2.43 ton/year.

Applicable Compliance Methods:

The short term emission rate was determined by multiplying 0.17 g/bhp-hr, the emission factor specified in the manufacturer's engine specification sheet obtained from Caterpillar, by 1,480 bhp, the power output rating of this unit, and dividing by 453.59 g/lb equals 0.5547 lb/hr (as submitted in application).

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

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

f. Emissions Limitation:

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

Applicable Compliance Method:

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

g. Emissions Limitation:

PE emissions from the stack serving this emissions unit shall not exceed 0.22lb/hr and 0.97 ton/year.

Applicable Compliance Method:

The short term emission rate was established by multiplying an emission factor of 0.0194 pound/million Btu, the emission factor is specified in AP-42 Table 3.2-2 (7/00), by the maximum heat input of the engine (11.39million Btu/hour).

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

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

If required, compliance with the hourly emission rate shall be determined according to 40 CFR Part 60, Appendix A, U.S. EPA Methods 1 - 5.

h. Emissions Limitation:

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

Applicable Compliance Method:

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

i. Emissions Limitation:

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

Applicable Compliance Method:

Compliance with this emission limitation may be based upon an emission factor of 0.0194 pound/million Btu of heat input. This emission factor is specified in the U.S. EPA reference document AP-42, Compilation of Air Pollution Emission Factors, Section 3.2, Table 3.2-2 (7/00).

If required, compliance with this emission limitation shall be determined according to OAC rule 3745-17-03(B)(10) and 40 CFR Part 60, Appendix A, U.S.EPA Methods 1 – 5.

j. Emissions Limitations:

NOx emissions shall not exceed 1.0 g/hp-hr and 82 ppmvd at 15% O₂.

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined according to 40 CFR Part 60, Appendix A, U.S.EPA Methods 1 - 4, 7E and 320. See f)(2) below.

k. Emissions Limitations:

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

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined according to 40 CFR Part 60, Appendix A, U.S.EPA Methods 1 - 4, 10, and 320. See f)(2) below.

l. Emissions Limitations:

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

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined according to 40 CFR Part 60, Appendix A, U.S.EPA Methods 1 or 1A, 2 or 19, 3, 3A or 3B, 4, 18, 25A and 320. See f)(2) below.

- (2) If the permittee chooses to demonstrate compliance with the emission standards specified in §60.4233(e) by performing a stack test, 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 2; and the following requirements:
- a. Conduct performance testing in the following manner:
 - i. if the permittee is purchasing an engine certified according to procedures specified in 40 CFR Part 60, Subpart JJJJ, but does not operate and maintain the certified, stationary, SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, an initial performance test shall be performed to demonstrate compliance with the mass emissions limitations in 40 CFR 60.4233(e) for VOC, NO_x, and CO within one year of startup; or
 - ii. if the permittee is purchasing a non-certified engine, an initial performance test shall be performed to demonstrate compliance with the mass emissions limitations in 40 CFR 60.4233(e) for VOC, NO_x, and CO, within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.
 - b. If the stationary internal combustion engine is rebuilt, or undergoes major repair or maintenance the permittee shall conduct subsequent performance test.
 - c. Each performance test must be conducted within 10% of 100% peak (or the highest achievable) load and according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 of 40 CFR Part 60, Subpart JJJJ.
 - d. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office's refusal to accept the results of the emission test(s).
 - e. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - f. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written

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report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.

g) Miscellaneous Requirements

(1) None.

9. Emissions Unit Group -2370 HP(16.09 MMBtu/hr) CAT NG Compressor Engines: P005,P006.

EU ID	Operations, Property and/or Equipment Description
P005	Compressor Engine #5 - 2370 HP (16.09 MMBtu/hr) Caterpillar G3608 engine (CM-1206-5) - natural gas-fired four-stroke lean burn internal combustion engine equipped with an oxidation catalyst controlling CO, VOC and CH2O 95, 75, and 90 percent respectively.
P006	Compressor Engine #6 - 2370 HP (16.09 MMBtu/hr) Caterpillar G3608 engine (CM-1206-6) - natural gas-fired four-stroke lean burn internal combustion engine equipped with an oxidation catalyst controlling CO, VOC and CH2O 95, 75, and 90 percent respectively.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. d)(3)

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC section 3704.03(T)	The nitrogen oxides (NOx)emission limitations established by this rule are equivalent to the NOxemission limitations listed in40 CFR Part 60, Subpart JJJJ, Table 1.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Carbon monoxide (CO) emissions from the stack serving this emissions unit shall not exceed 3.15tons/year. Volatile Organic compounds (VOC) emissions from the stack serving this emissions unit shall not exceed 6.89tons/year. Visible particulate emissions (PE) shall

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>not exceed 10% opacity from the stack serving this emissions unit, as a 6-minute average.</p> <p>PE emissions from the stack serving this emissions unit shall not exceed 0.16 lb/hr and 0.7 ton/ year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and OAC rule 3745-17-11.</p> <p>See b)(2)a. below.</p>
c.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b. below.
d.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)c. below.
e.	<p>40 CFR Part 60, Subpart JJJJ (40 CFR 60.4230 – 60.4248)</p> <p>[In accordance with 40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1, this emissions unit is a 2370hp, natural gas-fired, stationary spark internal combustion engine manufactured after January 1, 2009 that is located at a new natural gas compressor station and is subject to the emission limitations and control measures specified in this section.]</p>	<p>NOx emissions shall not exceed 1.0 g/hp-hr and 82ppmvd at 15% oxygen (O₂).</p> <p>CO emissions shall not exceed 2.0 g/hp-hr and 270 ppmvd at 15% O₂.</p> <p>VOC emissions shall not exceed 0.7 g/hp-hr and 60ppmvd at 15% O₂.</p> <p>[40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1]</p>
f.	40 CFR Part 60.1 – 19 (40 CFR 60.4246)	Table 3 to Subpart JJJJ of 40 CFR Part 60 – Applicability of General Provisions to Subpart JJJJ shows which part of the General Provisions in 40 CFR Part 60.1 – 19 apply.
g.	OAC rule 3745-17-11(B)(5)(b)	PE shall not exceed 0.062 pound/million Btu actual heat input.
h.	OAC rule 3745-17-07(A)(1)	<p>Visible PE from the stack serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by the rule.</p> <p>This emission limitation is less stringent than the limitations listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006,</p>

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		version of OAC rule 3745-31-05 as part of the State Implementation Plan.

(2) Additional Terms and Conditions

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

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

Permit-to-install and operate P0110243 for this air contaminant source takes into account the following voluntary restriction (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3):

- i. The emissions from the engine are vented to a oxidation catalyst controlling CO, VOC and CH₂O 95, 75, and 90 percent respectively, at all times the emissions unit is in operation.
- ii. CO emissions shall not exceed 3.15 tons/year.
- iii. VOC emissions shall not exceed 6.89 tons/year.

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

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

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

60.4236(b)	Installation deadlines
60.4243(b)	Compliance demonstration

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.
- (2) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart JJJJ, including the following sections:

60.4234	Duration of compliance with emission standards
60.4243(b)	Maintenance requirements
60.4243(e)	Alternative fuel
60.4243(f)	Performance testing
60.4243(g)	AFR controllers

d) Monitoring and/or Recordkeeping Requirements

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

60.4245(a) and (d)	Notification, record keeping, and reporting requirements
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- (3) The permit to install and operate for this emissions unit ((P001, P002, P003, P004, P005, P006, P007 and P008) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install and operate application. The applicant performed modeling for the toxic pollutant(s) emitted at over a ton per year using the AERMOD model – version 12060. The predicted 1-hour maximum ground-level concentration result(s) from the use of the AERMOD model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated using AERMOD. The following summarizes the results of the modeling for the “worst case” pollutant(s):

Pollutant: Acetaldehyde (CH₃CHO) and Formaldehyde (CH₂O)

TLV (ug/m³): 272

Maximum Hourly Emission Rate (lbs/hr): 0.42

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 2.36

MAGLC (ug/m³): 6.47

The permittee, has demonstrated that emissions of Acetaldehyde (CH₃CHO) and Formaldehyde (CH₂O), from emissions units P001, P002, P003, P004, P005, P006, P007 and P008 is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. Changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs, Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices";
- b. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- i. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

- ii. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- iii. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through Ohio EPA's e-business center: Air Services online web portal; or they may be mailed as a hard copy to the Ohio EPA, Southeast District Office.
- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (4) Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. construction date (no later than 30 days after such date);
 - b. actual start-up date (within 15 days after such date); and
 - c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
50 West Town Street, Suite 700
P. O. Box 1049
Columbus, Ohio 43216-1049

and

Southeast District Office of the Ohio EPA
Division of Air Pollution Control
2195 Front Street, Logan, Ohio 43138.

- (5) The permittee shall submit notifications and reports to the Ohio EPA, Southeast District Office as required pursuant to 40 CFR Part 60, Subpart JJJJ, per the following sections:

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60.4243(b)(2)(ii) and 60.4245	Keeping of maintenance plan and records of maintenance conducted on the engine
60.4245(a)	Maintenance of notifications and supporting documentation
60.4245(b)	Keep records of the hours of operation of the engine recorded through a non-resettable hour meter
60.4245(c)	Must submit an initial notification

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. Purchasing an engine certified according to procedures specified in 40 CFR Part 60, Subpart JJJJ for the same model year and demonstrating compliance according to one of the methods specified in 40 CFR 60.4243(b).
 - i. If the permittee operates and maintains the certified, stationary, SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the permittee must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required.
 - ii. If the permittee does not operate and maintain the certified, stationary, SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine, and the permittee must keep a maintenance plan and records of conducted maintenance consistent with good air pollution control practices for minimizing emissions. In addition, the permittee must conduct an initial performance test within 1 year of engine startup.
- b. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in 40 CFR 60.4233(e) and according to the requirements specified in 40 CFR 60.4244, as applicable. The permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practices for minimizing emissions. In addition, the permittee must conduct an initial performance test. See 40 CFR 60.4243(b)(2)(ii).
- c. Emissions Limitation:

CO emissions shall not exceed 3.15 ton/year.

Applicable Compliance Methods:

The short term emission rate was determined by multiplying 0.1375 g/bhp-hr, the emission factor specified in the manufacturer's engine specification sheet obtained from Caterpillar, by 2,370 bhp, the power output rating of this unit, and dividing by 453.59 g/lb equals 0.718lb/hr (as submitted in application).

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

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

d. Emissions Limitation:

VOC emissions shall not exceed 6.89 ton/year.

Applicable Compliance Methods:

The short term emission rate was determined by multiplying 0.30 g/bhp-hr, the emission factor specified in the manufacturer's engine specification sheet obtained from Caterpillar, by 2,370 bhp, the power output rating of this unit, and dividing by 453.59 g/lb equals 1.57lb/hr (as submitted in application).

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

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

e. Emissions Limitation:

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

Applicable Compliance Method:

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

f. Emission Limitation:

PE emissions from the stack serving this emissions unit shall not exceed 0.16lb/hr and 0.7 ton/year.

Applicable Compliance Method:

The short term emission rate was determined by multiplying an emission factor of 0.0099 pound/million Btu, the emission factor is specified in AP-42 Table 3.2-2 (7/00), by the maximum heat input of the engine (16.094million Btu/hour).

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

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

If required, compliance with the short term emission rate shall be determined according to 40 CFR Part 60, Appendix A, U.S. EPA Methods 1 - 5.

g. Emissions Limitation:

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

Applicable Compliance Method:

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

h. Emissions Limitation:

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

Applicable Compliance Method:

Compliance with this emission limitation may be based upon an emission factor of 0.0099 pound/million Btu of heat input. This emission factor is specified in the U.S. EPA reference document AP-42, Compilation of Air Pollution Emission Factors, Section 3.2, Table 3.2-2 (7/00).

If required, compliance with this emission limitation shall be determined according to OAC rule 3745-17-03(B)(10) and 40 CFR Part 60, Appendix A, U.S.EPA Methods 1 – 5.

i. Emissions Limitations:

NOx emissions shall not exceed 1.0 g/hp-hr and 82 ppmvd at 15% O₂.

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined according to 40 CFR Part 60, Appendix A, U.S.EPA Methods 1 - 4, 7E and 320. See f)(2) below.

j. Emissions Limitations:

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

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined according to 40 CFR Part 60, Appendix A, U.S.EPA Methods 1 - 4, 10, and 320. See f)(2) below.

k. Emissions Limitations:

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

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined according to 40 CFR Part 60, Appendix A, U.S.EPA Methods 1 or 1A, 2 or 19, 3, 3A or 3B, 4, 18, 25A and 320. See f)(2) below.

(2) If the permittee chooses to demonstrate compliance with the emission standards specified in §60.4233(e) by performing a stack test, 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 2; and the following requirements:

a. Conduct performance testing in the following manner:

i. if the permittee is purchasing an engine certified according to procedures specified in 40 CFR Part 60, Subpart JJJJ, but does not operate and maintain the certified, stationary, SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, an initial performance test shall be performed to demonstrate compliance with the mass emissions limitations in 40 CFR 60.4233(e) for VOC, NO_x, and CO within one year of startup; or

ii. if the permittee is purchasing a non-certified engine, an initial performance test shall be performed to demonstrate compliance with the mass emissions limitations in 40 CFR 60.4233(e) for VOC, NO_x, and CO, within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.

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

c. Each performance test must be conducted within 10% of 100% peak (or the highest achievable) load and according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 of 40 CFR Part 60, Subpart JJJJ.

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

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

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

g) **Miscellaneous Requirements**

- (1) None.

10. Emissions Unit Group -4735 HP (35.45 MMBtu/hr) CAT NG Compressor Engines: P007,P008,

EU ID	Operations, Property and/or Equipment Description
P007	Compressor Engine #7 - 4735 HP (35.45 MMBtu/hr) Caterpillar G3616 engine (CM-1206-7) - natural gas-fired four-stroke lean burn internal combustion engine equipped with an oxidation catalyst controlling CO, VOC and CH ₂ O 95, 75, and 90 percent respectively.
P008	Compressor Engine #8 - 4735 HP (35.45 MMBtu/hr) Caterpillar G3616 engine (CM-1206-8) - natural gas-fired four-stroke lean burn internal combustion engine equipped with an oxidation catalyst controlling CO, VOC and CH ₂ O 95, 75, and 90 percent respectively.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. d)(3)

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC section 3704.03(T)	The nitrogen oxides (NO _x), and volatile organic compounds (VOC) emission limitations established by this rule are equivalent to the NO _x and VOC emission limitations listed in 40 CFR Part 60, Subpart JJJJ, Table 1.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Carbon monoxide (CO) emissions from the stack serving this emissions unit shall not exceed 6.29 tons/year. Visible particulate emissions (PE) shall not exceed 10% opacity from the stack serving this emissions unit, as a 6-minute average.

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	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>PE emissions from the stack serving this emissions unit shall not exceed 0.35 lb/hr and 1.55 ton/ year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and OAC rule 3745-17-11.</p> <p>See b)(2)a. below.</p>
c.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)b. below.
d.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)c. below.
e.	<p>40 CFR Part 60, Subpart JJJJ (40 CFR 60.4230 – 60.4248)</p> <p>[In accordance with 40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1, this emissions unit is a 4,735hp, natural gas-fired, stationary spark internal combustion engine manufactured after January 1, 2009 that is located at a new natural gas compressor station and is subject to the emission limitations and control measures specified in this section.]</p>	<p>NOx emissions shall not exceed 1.0 g/hp-hr and 82ppmvd at 15% oxygen (O₂).</p> <p>CO emissions shall not exceed 2.0 g/hp-hr and 270 ppmvd at 15% O₂.</p> <p>VOC emissions shall not exceed 0.7 g/hp-hr and 60ppmvd at 15% O₂.</p> <p>[40 CFR Part 60.4233(e) and 40 CFR Part 60, Subpart JJJJ, Table 1]</p>
f.	40 CFR Part 60.1 – 19 (40 CFR 60.4246)	Table 3 to Subpart JJJJ of 40 CFR Part 60 – Applicability of General Provisions to Subpart JJJJ shows which part of the General Provisions in 40 CFR Part 60.1 – 19 apply.
g.	OAC rule 3745-17-11(B)(5)(b)	PE shall not exceed 0.062 pound/million Btu actual heat input.
h.	OAC rule 3745-17-07(A)(1)	<p>Visible PE from the stack serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by the rule.</p> <p>This emission limitation is less stringent than the limitations listed under OAC rule 3745-31-05(A)(3), until such time as U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.</p>

(2) Additional Terms and Conditions

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

Permit-to-install and operate P0110243 for this air contaminant source takes into account the following voluntary restriction (including the use of any applicable air pollution control equipment) as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3):

- i. The emissions from the engine are vented to a oxidation catalyst controlling CO, VOC and CH₂O 95, 75, and 90 percent respectively, at all times the emissions unit is in operation.
- ii. CO emissions shall not exceed 6.29 tons/year.

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

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

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

60.4236(b)	Installation deadlines
60.4243(b)	Compliance demonstration

c) Operational Restrictions

- (1) The permittee shall burn only natural gas in this emissions unit.
- (2) The permittee shall comply with the applicable restrictions of 40 CFR Part 60, Subpart JJJJ, including the following sections:

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60.4234	Duration of compliance with emission standards
60.4243(b)	Maintenance requirements
60.4243(e)	Alternative fuel
60.4243(f)	Performance testing
60.4243(g)	AFR controllers

d) Monitoring and/or Recordkeeping Requirements

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

60.4245(a) and (d)	Notification, record keeping, and reporting requirements
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- (3) The permit to install and operate for this emissions unit (P007 & P008) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install and operate application. The applicant performed modeling for the toxic pollutant(s) emitted at over a ton per year using the AERMOD model – version 12060. The predicted 1-hour maximum ground-level concentration result(s) from the use of the AERMOD model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated using AERMOD. The following summarizes the results of the modeling for the “worst case” pollutant(s):

Pollutant: Acetaldehyde (CH₃CHO) and Formaldehyde (CH₂O)

TLV (ug/m³): 272

Maximum Hourly Emission Rate (lbs/hr): 0.42

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 2.36

MAGLC (ug/m³): 6.47

The permittee, has demonstrated that emissions of Acetaldehyde (CH₃CHO) and Formaldehyde (CH₂O), from emissions units P001, P002, P003, P004, P005, P006, P007 and P008 is calculated to be less than eighty per cent of the maximum acceptable

ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. Changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs, Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices";
- b. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- i. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- ii. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- iii. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through Ohio EPA's e-business center: Air Services online web portal; or they may be mailed as a hard copy to the Ohio EPA, Southeast District Office.
- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (4) Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:
 - a. construction date (no later than 30 days after such date);
 - b. actual start-up date (within 15 days after such date); and
 - c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
50 West Town Street, Suite 700
P. O. Box 1049
Columbus, Ohio 43216-1049

and

Southeast District Office of the Ohio EPA
Division of Air Pollution Control
2195 Front Street, Logan, Ohio 43138.

- (5) The permittee shall submit notifications and reports to the Ohio EPA, Southeast District Office as required pursuant to 40 CFR Part 60, Subpart JJJJ, per the following sections:

60.4243(b)(2)(ii) and 60.4245	Keeping of maintenance plan and records of maintenance conducted on the engine
60.4245(a)	Maintenance of notifications and supporting documentation
60.4245(b)	Keep records of the hours of operation of the engine recorded through a non-

	resettable hour meter
60.4245(c)	Must submit an initial notification

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. Purchasing an engine certified according to procedures specified in 40 CFR Part 60, Subpart JJJJ for the same model year and demonstrating compliance according to one of the methods specified in 40 CFR 60.4243(b).
 - i. If the permittee operates and maintains the certified, stationary, SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the permittee must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required.
 - ii. If the permittee does not operate and maintain the certified, stationary, SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine, and the permittee must keep a maintenance plan and records of conducted maintenance consistent with good air pollution control practices for minimizing emissions. In addition, the permittee must conduct an initial performance test within 1 year of engine startup.
- b. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in 40 CFR 60.4233(e) and according to the requirements specified in 40 CFR 60.4244, as applicable. The permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practices for minimizing emissions. In addition, the permittee must conduct an initial performance test. See 40 CFR 60.4243(b)(2)(ii).

c. Emissions Limitation:

CO emissions shall not exceed 6.29 ton/year.

Applicable Compliance Methods:

The short term emission rate was determined by multiplying 0.1375 g/bhp-hr, the emission factor specified in the manufacturer's engine specification sheet obtained from Caterpillar, by 4735 bhp, the power output rating of this unit, and dividing by 453.59 g/lb equals 1.43 lb/hr (as submitted in application).

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

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

d. Emissions Limitation:

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

Applicable Compliance Method:

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

e. Emissions Limitation:

PE emissions from the stack serving this emissions unit shall not exceed 0.35lb/hr and 1.55 ton/year.

Applicable Compliance Method:

The short term emission rate was determined by multiplying an emission factor of 0.00999 pound/million Btu, the emission factor is specified in AP-42 Table 3.2-2 (7/00), by the maximum heat input of the engine (35.45million Btu/hour) equals 0.35415 lb/hr (as submitted in the application).

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

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

If required, compliance with the short term emission rate shall be determined according to 40 CFR Part 60, Appendix A, U.S. EPA Methods 1 - 5.

f. Emissions Limitation:

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

Applicable Compliance Method:

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

g. Emissions Limitation:

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

Applicable Compliance Method:

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

If required, compliance with this emission limitation shall be determined according to OAC rule 3745-17-03(B)(10) and 40 CFR Part 60, Appendix A, U.S.EPA Methods 1 – 5.

h. Emissions Limitations:

NOx emissions shall not exceed 1.0 g/hp-hr and 82 ppmvd at 15% O₂.

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined according to 40 CFR Part 60, Appendix A, U.S.EPA Methods 1 - 4, 7E and 320. See f)(2) below.

i. Emissions Limitations:

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

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined according to 40 CFR Part 60, Appendix A, U.S.EPA Methods 1 - 4, 10, and 320. See f)(2) below.

j. Emissions Limitations:

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

Applicable Compliance Method:

If required, compliance with these emission limitations shall be determined according to 40 CFR Part 60, Appendix A, U.S.EPA Methods 1 or 1A, 2 or 19, 3, 3A or 3B, 4, 18, 25A and 320. See f)(2) below.

(2) If the permittee chooses to demonstrate compliance with the emission standards specified in §60.4233(e) by performing a stack test, 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 2; and the following requirements:

a. Conduct performance testing in the following manner:

i. if the permittee is purchasing an engine certified according to procedures specified in 40 CFR Part 60, Subpart JJJJ, but does not operate and

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maintain the certified, stationary, SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, an initial performance test shall be performed to demonstrate compliance with the mass emissions limitations in 40 CFR 60.4233(e) for VOC, NO_x, and CO within one year of startup; or

- ii. if the permittee is purchasing a non-certified engine, an initial performance test shall be performed to demonstrate compliance with the mass emissions limitations in 40 CFR 60.4233(e) for VOC, NO_x, and CO, within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.
 - b. If the stationary internal combustion engine is rebuilt, or undergoes major repair or maintenance the permittee shall conduct subsequent performance test.
 - c. Each performance test must be conducted within 10% of 100% peak (or the highest achievable) load and according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 of 40 CFR Part 60, Subpart JJJJ.
 - d. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office's refusal to accept the results of the emission test(s).
 - e. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - f. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.
- g) Miscellaneous Requirements
- (1) None.