



4/11/2014

Certified Mail

Fran DeSanctis
PETROX INC -SUNDAY CREEK COAL 54
6227 Amelia Ave.
Ashtabula, OH 44004

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
Yes	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0637000069
Permit Number: P0115881
Permit Type: Initial Installation
County: Hocking

Dear Permit Holder:

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

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

How to appeal this permit

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

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

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

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

If you have any questions, please contact Ohio EPA DAPC, Southeast District Office at (740)385-8501 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael 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
PETROX INC -SUNDAY CREEK COAL 54**

Facility ID:	0637000069
Permit Number:	P0115881
Permit Type:	Initial Installation
Issued:	4/11/2014
Effective:	4/11/2014
Expiration:	4/11/2024



Division of Air Pollution Control
Permit-to-Install and Operate
for
PETROX INC -SUNDAY CREEK COAL 54

Table of Contents

Authorization	1
A. Standard Terms and Conditions	3
1. What does this permit-to-install and operate ("PTIO") allow me to do?.....	4
2. Who is responsible for complying with this permit?	4
3. What records must I keep under this permit?	4
4. What are my permit fees and when do I pay them?.....	4
5. When does my PTIO expire, and when do I need to submit my renewal application?	4
6. What happens to this permit if my project is delayed or I do not install or modify my source?	5
7. What reports must I submit under this permit?	5
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?	5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ...	5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?	6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?	6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently?	6
13. Can I transfer this permit to a new owner or operator?.....	7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?	7
15. What happens if a portion of this permit is determined to be invalid?	7
B. Facility-Wide Terms and Conditions.....	8
C. Emissions Unit Terms and Conditions	10
1. B002, 71 HP, 4.9L Natural Gas Compressor Engine.....	11



Final Permit-to-Install and Operate
PETROX INC -SUNDAY CREEK COAL 54
Permit Number: P0115881
Facility ID: 0637000069
Effective Date: 4/11/2014

Authorization

Facility ID: 0637000069
Application Number(s): A0049430
Permit Number: P0115881
Permit Description: 71 HP Natural Gas Engine
Permit Type: Initial Installation
Permit Fee: \$400.00
Issue Date: 4/11/2014
Effective Date: 4/11/2014
Expiration Date: 4/11/2024
Permit Evaluation Report (PER) Annual Date: July 1 - June 30, Due Aug 15

This document constitutes issuance to:

PETROX INC -SUNDAY CREEK COAL 54
GOOSE RUN ROAD
WARD TOWNSHIP, OH 43138

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

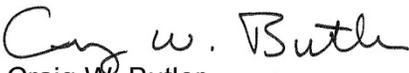
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

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

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Director



Final Permit-to-Install and Operate
PETROX INC -SUNDAY CREEK COAL 54
Permit Number: P0115881
Facility ID: 0637000069
Effective Date: 4/11/2014

Authorization (continued)

Permit Number: P0115881
Permit Description: 71 HP Natural Gas Engine

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

Emissions Unit ID:	B002
Company Equipment ID:	Z001
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
PETROX INC -SUNDAY CREEK COAL 54
Permit Number: P0115881
Facility ID: 0637000069
Effective Date: 4/11/2014

A. Standard Terms and Conditions



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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

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

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

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



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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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



Final Permit-to-Install and Operate
PETROX INC -SUNDAY CREEK COAL 54
Permit Number: P0115881
Facility ID: 0637000069
Effective Date: 4/11/2014

B. Facility-Wide Terms and Conditions



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.
2. The following emissions unit contained in this permit is subject to 40 CFR Part 60, Subpart JJJJ: P001. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the appropriate Ohio EPA District office or local air agency.
3. The Ohio EPA has determined that this facility may be subject to the requirements of the area source MACT/GACT rule (40 CFR Part 63, Subpart ZZZZ) that the Ohio EPA does not have the delegated authority to implement. Although Ohio EPA has determined that an area source MACT (also known as the GACT) may apply, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised that all requirements associated with these rules are in effect and are enforceable by U.S. EPA. For more information on the area source rules, please refer to the following U.S. EPA website: <http://www.epa.gov/ttn/atw/area/arearules.html>.



Final Permit-to-Install and Operate
PETROX INC -SUNDAY CREEK COAL 54
Permit Number: P0115881
Facility ID: 0637000069
Effective Date: 4/11/2014

C. Emissions Unit Terms and Conditions



1. B002, 71 HP, 4.9L Natural Gas Compressor Engine

Operations, Property and/or Equipment Description:

71 HP (@ 1,700 RPM), 0.5 million BTU/hr Buck's United Engine 4.3L, Serial #10AD2W103340183, natural-gas fired stationary internal combustion compressor engine with air/fuel ratio and selective catalytic reduction, for the control of Nitrogen Oxides (NO_x), manufactured on December 6, 2011.

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 11/30/2001	Install an engine designed to meet 0.45 g/HP-hr of NO _x emissions, 0.05 g/HP-hr of carbon monoxide (CO) emissions , and 0.11 g/HP-hrof volatile organic compound (VOC) emissions. Particulate emissions (PE) shall not exceed 0.0018 ton per month averaged over a 12-month, rolling period. See b)(2)a. below.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/2006	See b)(2)b. below.
c.	OAC rule 3745-17-11(B)(5)(a)	PE shall not exceed 0.310 pound/million Btu actual heat input.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed 20% opacity from the stack, as a 6-minute average.
e.	<p>40 CFR Part 60, Subpart JJJJ (40 CFR 60.1-19 and 60.4230–60.4248)</p> <p>[In accordance with 40 CFR 60.4230 (a)(4)(iii), this emissions unit is a stationary spark ignition internal combustion engine that commenced construction after June 12, 2006 and manufactured on or after July 1, 2008, with an engine power less than 500 HP] [40 CFR 1048.101(c), the Tier 2 field testing emissions standards, including the optimal range based on the formula in 40 CFR 1045.101(c)(3)]</p>	<p>The exhaust emissions from this engine shall not exceed the Tier 2 field testing emissions standards found in 40 CFR 1048.101(c).</p> <p>The Tier 2 standard for hydrocarbon + nitrogen oxides (HC+NO_x) is 3.8 g/kW-hr and for carbon monoxide (CO) is 6.5 g/kW-hr; however, the engine may optionally be certified to the Tier 2 field testing standards, where HC+NO_x varies inversely with CO according to the following ratio: (HC+NO_x)x CO 0.791 ≤ 16.78.</p> <p>The following limitations are the boundaries of the field-testing standards:</p> <p>3.8 grams HC+NO_x per kilowatt hour (g/kW-hr), where CO is 6.5 g/kW-hr and 31.0 g CO/kW-hr where HC+NO_x is 1.1 g/kW-hr.</p> <p>The emissions limitations for CO and NO_x are 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>
f.	40 CFR Part 63, Subpart A (40 CFR 60.4246)	Table 3 of 40 CFR Part 60, Subpart JJJJ shows which parts of the General Provisions in Subpart A apply to owners and operators of affected facilities subject to this subpart.

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

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	Over the life of the engine, operate and maintain engine to the emission standards as required in 60.4233.
60.4243(b) and 60.4243(b)(2)	For a non-certified engine, demonstrate compliance with emission standards specified in 60.4233(e) according to 60.4243(ii).
60.4243(e)	Requirements when operating engine with alternative fuel
60.4243(f)	Requirements when operating a certified engine not according to manufacturer's written emission standards

- (3) The permittee shall install and operate the engines with a selective catalytic reduction for the control of NO_x emissions whenever this emissions unit is in operation and shall maintain the engine in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.
- (4) In the event the engine is not operating in accordance with the manufacturer's recommendations, instructions, or operating manual, with any modifications deemed



necessary by the permittee, the engine shall be expeditiously repaired or otherwise returned to these documented operating conditions.

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/or recordkeeping requirements required under 40 CFR Part 60, Subpart JJJJ, including the following sections:

60.4243(b)(2)(i)	Keep a maintenance plan and records of maintenance conducted on the engine.
60.4245(a)(1)	Maintain records notifications submitted to maintain compliance with 40 CFR Part 60, Subpart JJJJ and all supporting documentation.
60.4245(a)(2)	Maintain records of maintenance conducted on the engine.
60.4245(2)(3)	Maintain documentation that the engine is certified to meet the emissions standards and information as required in 40 CFR Parts 90, 1048, 1054 and 1060, as applicable.
60.4245(a)(4)	Maintain documentation that the engine meets emission standards as required in 40 CFR Parts 90, 1048, 1054 and 1060, as applicable, if the SI ICE is not a certified engine, or, is operated in a non-certified manner.

- (3) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the engine, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the appropriate Ohio EPA District Office or local air agency upon request.
- (4) The permittee shall conduct periodic inspections of the engine to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the



manufacturer's recommended inspection frequency and it shall be made available to the Ohio EPA upon request.

- (5) In addition to the recommended periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the engine and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer's recommendations.
- (6) The permittee shall document each inspection (periodic and annual) of the engine and shall maintain the following information:
 - a. the date of the inspection;
 - b. a description of each/any problem identified and the date it was corrected;
 - c. a description of any maintenance and repairs performed; and
 - d. the name of person who performed the inspection.

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

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

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas and/or number two fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (3) The permittee shall submit notifications and reports to the Ohio EPA, Southeast District Office as required pursuant to 40 CFR Part 60, Subpart JJJJ, per the following sections:

60.4245(d)	Submit a copy of each performance test within 60 days after completion of test.
------------	---------------------------------------------------------------------------------



f) Testing Requirements

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

60.4243(b)(2)(i)	Conduct an initial performance test and subsequent performance tests every 8,760 hrs. or every 3 years, whichever comes first.
60.4244(a)-(g)	Test methods for owners and operators of certified engines

- (2) 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:

3.8 grams HC + NOx/kW-hr, where CO is 6.5 g/kW-hr¹

Applicable Compliance Method:

Compliance with the emission limitations shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr limit is from the Tier 2 field testing emission standards from 40 CFR 1048.101(c), the exhaust emission standards for spark ignition engines greater than 25 horsepower and starting in 2007. The engine may optionally be certified to the alternative Tier 2 field testing standards based on the formula identified in 40 CFR 1048.101(c)(3), where HC+NOx varies inversely with CO according the following ratio: $(HC+NOx) \times CO^{0.791} \leq 16.78$.

In order to be conservative and for the purpose of reporting annual emissions, where the limit is for NOx + HC, the NOx and VOC limits shall be calculated

¹ The exhaust emissions from this engine shall not exceed the Tier 2 field testing emissions standards found in 40 CFR 1048.101(c), where the hydrocarbon + nitrogen oxides (HC+NOx) standard varies inversely with the carbon monoxide (CO) standard according the following ratio: $(HC+NOx) \times CO^{0.791} \leq 16.78$. The above limits are the extreme boundaries of the standard and the ton per rolling 12-month limits were established based on the maximum limit for each pollutant in this ratio. Compliance is based on the manufacturer's certification and/or emissions stack testing, and by operating the engine according to the manufacturer's operations manual and/or instructions.



using a ratio of 80% NO_x to 20% VOC (a more precise estimate may be submitted by the permittee or obtained from the manufacturer).

$$3.8 \text{ g NO}_x\text{+HC/kW-hr} \times 80\% \text{ NO}_x = 3.04 \text{ grams NO}_x\text{/kW-hr}$$

b. Emissions Limitation:

$$31.0 \text{ grams CO/kW-hr, where HC+NO}_x \text{ is } 1.1 \text{ g/kW-hr}^{**}$$

Applicable Compliance Method:

Compliance with the emission limitations shall be based on the manufacturer's certification and by maintaining the engine according to the manufacturer's specifications. The g/kW-hr limit is from the Tier 2 field testing emission standards from 40 CFR 1048.101(c), the exhaust emission standards for spark ignition engines greater than 25 horsepower and starting in 2007. The engine may optionally be certified to the alternative Tier 2 field testing standards based on the formula identified in 40 CFR 1048.101(c)(3), where HC+NO_x varies inversely with CO according to the following ratio: $(\text{HC+NO}_x) \times \text{CO}^{0.791} \leq 16.78$.

c. Design Efficiency:

Install an engine designed to meet 0.45 g/HP-hr of NO_x emissions, 0.05 g/HP-hr of CO emissions, and 0.11 g/HP-hr of VOC emissions.

Applicable Compliance Method:

Based on Buck's Engine design specification sheet (ISO 8178 D2 Cycle Emission Test Results, Buck's GM EPA Certified 4.3L Engine), submitted in permittee's application.

d. Emissions Limitations:

PE shall not exceed 0.0018 ton per month averaged over a 12-month, rolling period.

Applicable Compliance Method:

Compliance with the PE limitation shall be based upon the following calculations:

$$\text{Ton per month averaged over a 12-month period} = (\text{emission rate})(\text{natural gas heating value}) (\text{hourly fuel usage}) (1 \text{ mmBTU}/1,000,000 \text{ BTU}) (8,760 \text{ hr/yr}) (\text{ton}/2,000) (\text{yr}/12 \text{ months})$$

$$= (0.00991 \text{ lb/mmBTU}) (1,000 \text{ Btu/scf}) (500 \text{ scf/hr}) (1\text{mmBTU}/1,000,000 \text{ BTU}) (8,760 \text{ hr/yr}) (\text{ton}/2,000) (\text{yr}/12 \text{ months})$$

$$= 0.0018 \text{ ton / month averaged over a 12-month, rolling period.}$$



Where:

1,000 Btu/scf = heating value of natural gas, as submitted in permittee's application

500 scf/hr = fuel usage per hour, as submitted in permittee's application

0.00991 lb/mmBTU = PE emission factor for natural gas 4 stroke rich burn engine, AP42 table 3.2-3 (7/00).

e. Emissions Limitation:

PE shall not exceed 0.310 lb/mmBTU, actual heat input.

Applicable Compliance Method:

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

f. Emissions Limitation:

Visible PE shall not exceed 10% opacity from the stack, as a 6-minute average.
Visible PE shall not exceed 20% opacity from the stack, as a 6-minute average.

Applicable Compliance Method:

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

- (3) If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).

If required, initial performance testing shall be conducted as required in 40 CFR 60.4243(b)(2) or 60.4243(a)(2)(ii) pursuant to 40 CFR 60.4244 and Subpart A of 40 CFR Part 60. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emissions testing for this emissions unit shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, as applicable,



- b. The emission testing shall be conducted to demonstrate compliance with the NO_x, CO, VOC and PE emission limitations specified in b)(1).
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for NO_x, Methods 1 through 4 and 7, 7A, 7C, 7D or 7E of 40 CFR Part 60, Appendix A;

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

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

and for PE, Methods 1 through 5 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) for each pollutant shall be conducted while the emissions unit is operating at or near its maximum capacity, while burning each fuel and/or combination of fuels, unless otherwise specified or approved by the Ohio EPA, Southeast District Office.
- e. 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).
- 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.
- g. 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) Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute" in ORC 3704.03(F)(4)(b) was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install and operate prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the



Final Permit-to-Install and Operate
PETROX INC -SUNDAY CREEK COAL 54
Permit Number: P0115881
Facility ID: 0637000069
Effective Date: 4/11/2014

composition of the materials, or use of new material, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install and operate.