



9/2/2014

Certified Mail

Mr. Steven Robinson
CARDINGTON YUTAKA TECHNOLOGIES
575 W Main Street
Cardington, OH 43315

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

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0159000140
Permit Number: P0115642
Permit Type: Renewal
County: Morrow

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, Central District Office at (614)728-3778 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-CDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
CARDINGTON YUTAKA TECHNOLOGIES**

Facility ID:	0159000140
Permit Number:	P0115642
Permit Type:	Renewal
Issued:	9/2/2014
Effective:	9/2/2014
Expiration:	9/2/2019



Division of Air Pollution Control
Permit-to-Install and Operate
for
CARDINGTON YUTAKA TECHNOLOGIES

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. B003, engine dynamometer	11
2. B004, Anechioc Dyno	20



Authorization

Facility ID: 0159000140
Application Number(s): A0048801
Permit Number: P0115642
Permit Description: FEPTIO Renewal for two 350 HP dynamometers vented to thermal oxidizers
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 9/2/2014
Effective Date: 9/2/2014
Expiration Date: 9/2/2019
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

CARDINGTON YUTAKA TECHNOLOGIES
575 W MAIN ST
CARDINGTON, OH 43315

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

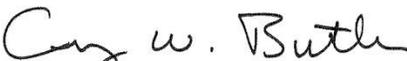
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049
(614)728-3778

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Director



Authorization (continued)

Permit Number: P0115642
 Permit Description: FEPTIO Renewal for two 350 HP dynamometers vented to thermal oxidizers

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

Emissions Unit ID:	B003
Company Equipment ID:	engine dynamometer
Superseded Permit Number:	P0103770
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	B004
Company Equipment ID:	Anechioc Dyno
Superseded Permit Number:	P0103770
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
CARDINGTON YUTAKA TECHNOLOGIES
Permit Number: P0115642
Facility ID: 0159000140
Effective Date: 9/2/2014

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
CARDINGTON YUTAKA TECHNOLOGIES
Permit Number: P0115642
Facility ID: 0159000140
Effective Date: 9/2/2014

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.



Final Permit-to-Install and Operate
CARDINGTON YUTAKA TECHNOLOGIES
Permit Number: P0115642
Facility ID: 0159000140
Effective Date: 9/2/2014

C. Emissions Unit Terms and Conditions



1. B003, engine dynamometer

Operations, Property and/or Equipment Description:

350 HP Engine Dynamometer vented to a thermal oxidizer.

- 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. b)(1)c., b)(2)c.iii., f)(1)c., and f)(1)d.
 - (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. b)(1)d., c)(1) through c)(3), d)(3), e)(3), and f)(1)b.
- 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 November 30, 2001	Emissions of particulate matter less than 10 microns in aerodynamic diameter (PM ₁₀) shall not exceed 0.19 pounds per hour (lb/hr). Emissions of particulate matter less than 2.5 microns in aerodynamic diameter (PM _{2.5}) shall not exceed 0.19 lb/hr. Sulfur dioxide (SO ₂) emissions shall not exceed 0.16 lb/hr. Carbon monoxide (CO) emissions shall not exceed 4.73 lb/hr. Volatile organic compound (VOC) emissions shall not exceed 0.18 lb/hr. Nitrogen oxides (NO _x) emissions shall not



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		exceed 3.06 lb/hr. See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(A)(3), as effective December 1, 2006	See b)(2)c.
c.	OAC rule 3745-31-05(E)	See b)(2)ciii.
d.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Title V)	Carbon Monoxide (CO) emissions shall not exceed 4.73 tons per rolling, 12-month period. See c)(1) through c)(3)
e.	OAC rule 3745-17-07(A)(1)	See Section b)(2)d.
f.	OAC rule 3745-17-11(B)(1)	See b)(2)e.
g.	OAC rule 3745-18-06	See b)(2)f.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. When U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.
- b. The hourly PM₁₀, PM_{2.5}, SO₂, CO, VOC, and NO_x emissions limitations were established to reflect the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements in order to demonstrate compliance with these limitations.
- c. The following rule paragraphs will apply when U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:
 - i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05 (A)(3) do not apply to the PM₁₀, PM_{2.5}, and SO₂ emissions from this air contaminant source since the potential to emit for each of these pollutants is less than ten tons per year (TPY);



- ii. The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO emissions from this air contaminant source because the calculated annual emission rate for CO is less than 10 TPY taking into account the federally enforceable rule limit of 4.73 tons per rolling, 12-month period under OAC rule 3745-31-05(D); and
 - iii. Permit to Install and Operate P0115642 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3):
 - (a) All of the VOC emissions from this emissions unit shall be vented to a regenerative thermal oxidizer with a minimum destruction efficiency of 96%;
 - (b) VOC emissions from this emissions unit shall not exceed 0.18 tons per year (TPY); and
 - (c) NO_x emissions from this emissions unit shall not exceed 3.06 TPY.
 - d. This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.
 - e. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11, does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14), is equal to zero.
 - f. OAC rule 3745-18-06(B) exempts stationary internal combustion engines which have rated heat input capacities equal to, or less than, 10 MMBtu/hr from the sulfur dioxide emission limit in OAC rule 3745-18-06(G). This emissions unit has a rated heat input of 3.75 MMBtu/hr.
- c) Operational Restrictions
- (1) The permittee shall burn only gasoline in this emissions unit.
 - (2) The maximum annual gasoline throughput for this emissions unit shall not exceed 60,000 gallons based upon a rolling, 12-month summation of the gasoline throughput.
 - (3) All of the CO emissions from this emissions unit shall be vented to a thermal oxidizer that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.



d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s) the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation. The permittee shall record the combustion temperature on an hourly basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted and the appropriate temperature range is established to demonstrate compliance. These records shall be maintained at the facility for a period of no less than 3 years.
- (2) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
 - a. the date and time the deviation began;
 - b. the magnitude of the deviation at that time;
 - c. the date the investigation was conducted;
 - d. the name(s) of the personnel who conducted the investigation; and
 - e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the temperature readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.



The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future emission tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the type and quantity of fuel burned, in gallons;
 - b. the CO emissions, in tons;
 - c. the VOC emissions, in tons;
 - d. the NO_x emissions, in tons;
 - e. the rolling, 12-month fuel throughput, in gallons; and
 - f. the rolling, 12-month CO emissions, in tons.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted 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.

The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the thermal oxidizer during the 12-month reporting period for this/these emissions unit(s):



- a. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;
 - b. each period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;
 - c. an identification of each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;
 - d. an identification of each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. an identification of each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s).
- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;
 - ii. each period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;
 - iii. each day when a fuel other than gasoline was burned in this emissions unit;
 - iv. each rolling, 12-month period during which gasoline usage exceeded 60,000 gallons; and
 - v. each rolling, 12-month period during which CO emissions exceeded 4.73 tons.
 - b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).



If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

The reports contained in this permit shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.

f) **Testing Requirements**

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

a. Emissions Limitations:

Emissions of the following pollutants shall not exceed the assigned values (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP):

- PM₁₀ emissions shall not exceed 0.19 lb/hr;
- PM_{2.5} emissions shall not exceed 0.19 lb/hr;
- SO₂ emissions shall not exceed 0.16 lb/hr;
- CO emissions shall not exceed 4.73 lb/hr;
- VOC emissions shall not exceed 0.18 lb/hr;
- NO_x emissions shall not exceed 3.06 lb/hr.

Applicable Compliance Method:

The hourly emissions limitations were established by multiplying the maximum hourly gasoline usage rate (30 gal/hr) by the following emissions factors:

<u>Pollutant</u>	<u>Emissions factor (lb/gal)</u>
PM ₁₀	0.0062
PM _{2.5}	0.0062
SO ₂	0.00531
CO	0.1576
VOC	0.00592
NO _x	0.102

b. Emissions Limitation:

CO emissions shall not exceed 4.73 tons per rolling, 12-month period.



Applicable Compliance Method:

Compliance shall be demonstrated by the recordkeeping requirements in d)(3) and the following equation:

$$\text{CO} = [(G * E_f) * (1 - \text{DE})] / 2000$$

where,

CO = Carbon Monoxide emissions rate (tons per month)

G = Actual monthly gasoline throughput (gallons)

E_f = Emissions factor in pounds of CO per gallon of gasoline burned (3.94)

DE = Destruction Efficiency of the regenerative thermal oxidizer (96.0%)

Compliance with the rolling, 12-month CO emissions limitation shall be demonstrated by summing the monthly CO emissions at the end of each 12-month period as required by the recordkeeping requirements in d)(3).

c. Emissions Limitation:

VOC emissions shall not exceed 0.18 TPY.

Applicable Compliance Method:

Compliance shall be demonstrated by the recordkeeping requirements in d)(3) and the following equation:

$$\text{VOC} = [(G * E_f) * (1 - \text{DE})] / 2000$$

where,

VOC = Organic Compound emissions rate (tons per month)

G = Actual monthly gasoline throughput (gallons)

E_f = Emissions factor in pounds of VOC per gallon of gasoline burned (0.148)

DE = Destruction Efficiency of the regenerative thermal oxidizer (96.0%)

Compliance with the annual VOC emissions limitation shall be demonstrated by summing the monthly VOC emissions at the end of each calendar year.

d. Emissions Limitation:

NO_x emissions shall not exceed 3.06 TPY.



Applicable Compliance Method:

Compliance shall be demonstrated by the recordkeeping requirements in d)(3) and the following equation:

$$NO_x = (G * E_f)/2000$$

where,

NO_x = Nitrogen Oxides emissions rate (tons per month)

G = Actual monthly gasoline throughput (gallons)

E_f = Emissions factor in pounds of NO_x per gallon of gasoline burned (0.102)

Compliance with the annual NO_x emissions limitation shall be demonstrated by summing the monthly NO_x emissions at the end of each calendar year.

- g) Miscellaneous Requirements
 - (1) None.



2. B004, Anechioc Dyno

Operations, Property and/or Equipment Description:

350 HP Engine dynamometer vented to a thermal oxidizer or controlled by a catalytic converter when operated with the anechoic chamber.

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. b)(1)d., b)(2)c.ii., f)(1)d., and f)(1)e.

(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. b)(1)e., c)(1) through c)(4), d)(3), e)(3), and f)(1)c.

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 November 30, 2001	<p>Emissions of particulate matter less than 10 microns in aerodynamic diameter (PM₁₀) shall not exceed 0.19 pounds per hour (lb/hr).</p> <p>Emissions of particulate matter less than 2.5 microns in aerodynamic diameter (PM_{2.5}) shall not exceed 0.19 lb/hr.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.16 lb/hr.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 4.44 lb/hr.</p> <p>Nitrogen oxides (NO_x) emissions shall not exceed 3.06 lb/hr.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(A)(3), as effective December 1, 2006	See b)(2)c.
c.	OAC rule 3745-31-05(A)(3)	Carbon monoxide (CO) emissions shall not exceed 57.68 lb/hr. See b)(2)b.
d.	OAC rule 3745-31-05(E)	See b)(2)cii.
e.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Title V)	Carbon Monoxide (CO) emissions shall not exceed 57.68 tons per rolling, 12-month period. See c)(1) through c)(4)
f.	OAC rule 3745-17-07(A)(1)	See Section b)(2)d.
g.	OAC rule 3745-17-11(B)(1)	See b)(2)e.
h.	OAC rule 3745-18-06	See b)(2)f.

(2) Additional Terms and Conditions

- a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. When U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.
- b. The hourly PM₁₀, PM_{2.5}, SO₂, CO, VOC, and NO_x emissions limitations were established to reflect the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements in order to demonstrate compliance with these limitations.
- c. The following rule paragraphs will apply when U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:
 - i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05 (A)(3) do not apply to the PM₁₀, PM_{2.5}, and SO₂ emissions from this air contaminant source since the potential to emit for each of these pollutants is less than ten tons per year (TPY); and



- ii. Permit to Install and Operate P0115642 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3):
 - (a) VOC emissions from this emissions unit shall not exceed 4.44 tons per year (TPY); and
 - (b) NO_x emissions from this emissions unit shall not exceed 3.06 TPY.
 - d. This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.
 - e. The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11, does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14), is equal to zero.
 - f. OAC rule 3745-18-06(B) exempts stationary internal combustion engines which have rated heat input capacities equal to, or less than, 10 MMBtu/hr from the sulfur dioxide emission limit in OAC rule 3745-18-06(G). This emissions unit has a rated heat input of 3.75 MMBtu/hr.
- c) Operational Restrictions
- (1) The permittee shall burn only gasoline in this emissions unit.
 - (2) The maximum annual gasoline throughput for this emissions unit shall not exceed 60,000 gallons based upon a rolling, 12-month summation of the gasoline throughput.
 - (3) All of the CO emissions from this emissions unit shall be vented to a catalytic converter when the anechoic chamber is in use or to a regenerative thermal oxidizer that shall meet the operational, monitoring, and record keeping requirements of this permit, when the anechoic chamber is not in use.
 - (4) The catalytic converters utilized by this emissions unit for the purpose of controlling CO emissions shall operate for not more than 100 hours before being replaced.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s) the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation. The permittee shall record the combustion temperature on an hourly basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any



required emission testing is conducted and the appropriate temperature range is established to demonstrate compliance. These records shall be maintained at the facility for a period of no less than 3 years.

- (2) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
- a. the date and time the deviation began;
 - b. the magnitude of the deviation at that time;
 - c. the date the investigation was conducted;
 - d. the name(s) of the personnel who conducted the investigation; and
 - e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the temperature readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future emission tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.



- (3) The permittee shall maintain monthly records of the following information for this emissions unit:
- a. the hours of operation for each catalytic converter;
 - b. the type and quantity of fuel burned when emissions were directed to the anechoic chamber and a catalytic converter, in gallons;
 - c. the type and quantity of fuel burned when emissions were directed to the regenerative thermal oxidizer, in gallons;
 - d. the CO emissions, in tons;
 - e. the VOC emissions, in tons;
 - f. the NO_x emissions, in tons;
 - g. the rolling, 12-month fuel throughput, in gallons; and
 - h. the rolling, 12-month CO emissions, in tons.

e) Reporting Requirements

- (1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted 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.

The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the thermal oxidizer during the 12-month reporting period for this/these emissions unit(s):

- a. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the



range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;

- b. each period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;
- c. an identification of each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;
- d. an identification of each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and
- e. an identification of each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s).

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration, when the emissions unit(s) is/are in operation and venting to the thermal oxidizer;
 - ii. each period of time (start time and date, and end time and date) during which emissions from this emissions unit were not directed to the anechoic chamber and controlled by a catalytic converter or directed to and controlled by a regenerative thermal oxidizer;
 - iii. each day when a fuel other than gasoline was burned in this emissions unit;
 - iv. each rolling, 12-month period during which gasoline usage exceeded 60,000 gallons; and
 - v. each rolling, 12-month period during which CO emissions exceeded 57.68 tons.
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and



d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (Central District Office).

The reports contained in this permit shall be submitted in accordance with the reporting requirements specified in the Standard Terms and Conditions of this permit.

f) **Testing Requirements**

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

a. Emissions Limitations:

Emissions of the following pollutants shall not exceed the assigned values (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP):

- PM₁₀ emissions shall not exceed 0.19 lb/hr;
- PM_{2.5} emissions shall not exceed 0.19 lb/hr;
- SO₂ emissions shall not exceed 0.16 lb/hr;
- VOC emissions shall not exceed 4.44 lb/hr;
- NO_x emissions shall not exceed 3.06 lb/hr.

Applicable Compliance Method:

The hourly emissions limitations were established by multiplying the maximum hourly gasoline usage rate (30 gal/hr) by the following emissions factors:

<u>Pollutant</u>	<u>Emissions factor (lb/gal)</u>
PM ₁₀	0.0062
PM _{2.5}	0.0062
SO ₂	0.00531
VOC	0.148
NO _x	0.102

b. Emissions Limitation:

CO emissions shall not exceed 57.68 lb/hr.



Applicable Compliance Method:

The hourly emissions limitations were established by multiplying the maximum hourly gasoline usage rate (30 gal/hr) by the following emissions factors:

<u>Pollutant</u>	<u>Emissions factor (lb/gal)</u>
CO	1.92

c. Emissions Limitation:

CO emissions shall not exceed 57.68 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by the recordkeeping requirements in d)(3) and the following equation:

$$CO = [(G * E_f) * (1-DE)] / 2000$$

where,

CO = Carbon Monoxide emissions rate (tons per month)

G = Actual monthly gasoline throughput (gallons)

E_f = Emissions factor in pounds of CO per gallon of gasoline burned (3.94)

DE = Destruction Efficiency of the catalytic converter (51.2%); or

DE = Destruction Efficiency of the regenerative thermal oxidizer (96.0%)

Compliance with the rolling, 12-month CO emissions limitation shall be demonstrated by summing the monthly CO emissions at the end of each 12-month period as required by the recordkeeping requirements in d)(3).

d. Emissions Limitation:

VOC emissions shall not exceed 4.44 TPY.

Applicable Compliance Method:

Compliance shall be demonstrated by the recordkeeping requirements in d)(3) and the following equation:

$$VOC = [(G * E_f) * (1-DE)] / 2000$$

where,

VOC = Organic Compound emissions rate (tons per month)

G = Actual monthly gasoline throughput (gallons)



E_f = Emissions factor in pounds of VOC per gallon of gasoline burned (0.148)

DE = Destruction Efficiency of the catalytic converter (0%); or

DE = Destruction Efficiency of the regenerative thermal oxidizer (96.0%)

Compliance with the annual VOC emissions limitation shall be demonstrated by summing the monthly VOC emissions at the end of each calendar year.

e. Emissions Limitation:

NO_x emissions shall not exceed 3.06 TPY.

Applicable Compliance Method:

Compliance shall be demonstrated by the recordkeeping requirements in d)(3) and the following equation:

$$NO_x = (G * E_f) / 2000$$

where,

NO_x = Nitrogen Oxides emissions rate (tons per month)

G = Actual monthly gasoline throughput (gallons)

E_f = Emissions factor in pounds of NO_x per gallon of gasoline burned (0.102)

Compliance with the annual NO_x emissions limitation shall be demonstrated by summing the monthly NO_x emissions at the end of each calendar year.

g) Miscellaneous Requirements

(1) None.