

Synthetic Minor Determination and/or **Netting Determination**

Permit To Install **14-05536**

A. Source Description

This facility is a university campus served by a main power plant/boiler house. The new sources identified in this permit, emissions units P001 and P002, are part of a co-generation project at the university power plant which includes construction/installation of two 5732 kilowatt natural gas-fired reciprocating internal combustion engines. The engines are 4-stroke lean burn units with a rating of 47.5 MMBTU/hour each.

B. Facility Emissions and Attainment Status

The university power plant currently consists of four (4) coal/gas/oil-fired boilers that are identified as regulated emissions units B010 - B014. The facility is a major source/Title V facility based on potential SO₂, NO_x, CO, and HAP emissions from fuel combustion. Actual facility-wide emissions, excluding the new sources P001 and P002, are as follows: 354 TPY SO₂, 95 TPY NO_x, 75 TPY CO, 31 TPY PE/PM₁₀, and 0.9 TPY VOC. Actual facility-wide emissions, including the new sources P001/P002 (actual emissions equal to potential/allowable emissions), are as follows: 354 TPY SO₂, 126 TPY NO_x, 86 TPY CO, 34 TPY PE/PM₁₀, and 12 TPY VOC. The permittee has requested the incorporation of annual operating hours restrictions on the new emissions units P001 and P002 in order to limit additional NO_x emissions below major source modification threshold (<40 TPY increase). The facility is located in Butler County which is nonattainment for 1-hr and 8-hr ozone. The permittee did perform and submit modeling to demonstrate compliance with Ohio EPA's policy that the maximum impact from the project not exceed 50 percent of the Class II PSD Increment for NO_x. The submitted modeling analysis demonstrated the NO_x impact was 12 percent of the increment.

C. Source Emissions

Emissions from sources P001 and P002 consist of the products of natural gas combustion. Sources P001 and P002 will be controlled by a catalytic oxidation system which will reduce engine emissions of CO by 93%, VOC by 75%, selected HAPs by 75%, and formaldehyde by 90% according to vendor data. The engines are lean burn units which reduces potential NO_x emissions according to vendor data. Potential emissions were calculated based on vendor-supplied emission data and USEPA AP-42 emission factors, worst case 100% engine load, and 3500 hours/year operation for each engine. Without restriction on hours of operation, potential NO_x emissions from P001 and P002, combined are 77 TPY. The emission limits and operating hours restrictions outlined in this permit will limit NO_x emissions from P001 and P002, combined to 31 TPY to avoid major modification status. The permittee will maintain hours of operation and emissions records as outlined in the permit to ensure compliance with the emission and operating hours limits.

D. Conclusion

The terms and conditions of this permit will limit the NO_x emissions to less than 40 TPY to avoid major source modification status. The permittee has accepted an annual operating hours restriction of 3,500 hours per engine. The permittee has satisfied NO_x and air toxics modeling required by Ohio EPA. The new sources P001 and P002 will employ lean burn technology for NO_x reduction and utilize a catalytic oxidation system to control CO and VOC/HAP emissions pursuant to the proposed MACT Subpart ZZZZ. Compliance with the emissions and operating hours limitations will be determined based on a rolling, 12-month summation. The permittee will maintain monthly records of the emissions and operating hours and submit reports to demonstrate compliance with the terms and conditions of the permit.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL CERTIFIED MAIL
BUTLER COUNTY**

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov.
Center

Application No: 14-05536

DATE: 6/10/2004

Miami University
Doug Hammerle
Miami Univ. Cole Service Building
Oxford, OH 45056

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$400** will be due. Please do not submit any payment now.

The Ohio EPA is urging 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 Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

HCDES

OH-KY-IN Reg Council of Governments

KY

IN

BUTLER COUNTY

PUBLIC NOTICE
ISSUANCE OF DRAFT PERMIT TO INSTALL 14-05536 FOR AN AIR CONTAMINANT SOURCE FOR
MIAMI UNIVERSITY

On 6/10/2004 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Miami University**, located at **501 E. High Street, Oxford, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 14-05536:

Construction and Installation of Two 5732 KW Natural Gas-Fired Reciprocating Internal Combustion Engines.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Brad Miller, Hamilton County Department of Environmental Services, 250 William Howard Taft Pkwy,
Cincinnati, OH 45219-2660 [(513)946-7777]



**Permit To Install
Terms and
Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 14-05536

Application Number: 14-05536
APS Premise Number: 1409090081
Permit Fee: **To be entered upon final issuance**
Name of Facility: Miami University
Person to Contact: Doug Hammerle
Address: Miami Univ. Cole Service Building
Oxford, OH 45056

Location of proposed air contaminant source(s) [emissions unit(s)]:

**501 E. High Street
Oxford, Ohio**

Description of proposed emissions unit(s):

Construction and Installation of Two 5732 KW Natural Gas-Fired Reciprocating Internal Combustion Engines.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

A. State and Federally Enforceable Permit To Install General Terms and Conditions**1. Monitoring and Related Recordkeeping and Reporting Requirements**

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

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

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

3. Risk Management Plans

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

4. Title IV Provisions

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

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

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

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally

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applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

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

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete

Miami University

Facility ID: 1409090081

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

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. Air Pollution Nuisance

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

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B. State Only Enforceable Permit To Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may

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be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

6. Public Disclosure

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

7. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

8. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the

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facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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

C. Permit To Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	31.0
CO	11.5
VOC	11.1
PE/PM10	3.1
SO2	0.10

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

MACT "Hammer" Requirements

1. The permittee may be subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines, 40 CFR Part 63, Subpart ZZZZ. U.S. EPA failed to promulgate this standard by May 15, 2002, the Maximum Achievable Control Technology (MACT) hammer date. In accordance with 40 CFR Part 63, Subpart B (40 CFR Parts 63.50 through 63.56), the permittee shall submit an application to revise the permit to include equivalent emission limitations as a result of a case-by-case MACT determination. The application shall be submitted in two parts. The deadline to submit the Part I application, as specified in 40 CFR Part 63.53, was May 15, 2002.
2. If the final NESHAP standard is not promulgated by the deadline specified by U.S. EPA, the permittee shall submit the Part II application as specified in 40 CFR Part 63.53. The Part II application shall be submitted within 60 days after the deadline to promulgate the respective standard or by May 15, 2003, whichever is later. It must contain the following information, unless otherwise specified by future U.S. EPA regulations:
 - a. for a new affected source, the anticipated date of startup of operation;
 - b. the hazardous air pollutants (HAPs) emitted by each affected source in the relevant source category and an estimated total uncontrolled and controlled emission rate for HAPs from the affected source;
 - c. any existing federal, State, or local limitations or requirements applicable to the affected source;
 - d. for each affected emission point or group of affected emission points, an identification of control technology in place;
 - e. information relevant to establishing the MACT floor (or MACT emission limitation), and, at the option of the permittee, a recommended MACT floor; and
 - f. any other information reasonably needed by the permitting authority including, at the discretion of the permitting authority, information required pursuant to Subpart A of 40 CFR Part 63.

The Part II application for a MACT determination may, but is not required to, contain the following information:

- a. recommended emission limitations for the affected source and support information (the permittee may recommend a specific design, equipment, work practice, or operational standard, or combination thereof, as an emission limitation);
- b. a description of the control technologies that would be applied to meet the emission limitation, including technical information on the design, operation, size, estimated control efficiency and any other information deemed appropriate by the permitting authority, and identification of the affected sources to which the control technologies must be applied; and
- c. relevant parameters to be monitored and frequency of monitoring to demonstrate continuous compliance with the MACT emission limitation over the applicable reporting

period.

3. If the NESHAP is promulgated before the Part II application is due for the relevant source category, the permittee may be subject to the rule as an existing major source with a compliance date as specified in the NESHAP. If subject, the permittee shall submit the following notifications:
 - a. Unless otherwise specified in the relevant Subpart, within 120 days after promulgation of a 40 CFR Part 63 Subpart to which the source is subject, the permittee shall submit an Initial Notification Report that contains the following information, in accordance with 40 CFR Part 63.9(b)(2):
 - i. the name and mailing address of the permittee;
 - ii. the physical location of the source if it is different from the mailing address;
 - iii. identification of the relevant MACT standard and the source's compliance date;
 - iv. a brief description of the nature, design, size, and method of operation of the source, and an identification of the types of emission points within the affected source subject to the relevant standard and the types of HAPs emitted; and
 - v. a statement confirming the facility is a major source for HAPs.
 - b. Unless otherwise specified in the relevant Subpart, within 60 days following completion of any required compliance demonstration activity specified in the relevant Subpart, the permittee shall submit a notification of compliance status that contains the following information:
 - i. the methods used to determine compliance;
 - ii. the results of any performance tests, visible emission observations, continuous monitoring systems performance evaluations, and/or other monitoring procedures or methods that were conducted;
 - iii. the methods that will be used for determining continuous compliance, including a description of monitoring and reporting requirements and test methods;
 - iv. the type and quantity of HAPs emitted by the source, reported in units and averaging times in accordance with the test methods specified in the relevant Subpart;
 - v. an analysis demonstrating whether the affected source is a major source or an area source;
 - vi. a description of the air pollution control equipment or method for each emission point, including each control device or method for each HAP and the control efficiency (percent) for each control device or method; and

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- vii. a statement of whether or not the permittee has complied with the requirements of the relevant Subpart.

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Miami
PTI A

Emissions Unit ID: P001

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P001 - 5732 KW Natural Gas Fired 4-stroke Lean Burn Reciprocating Engine	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-11(B)(5)(b)
		OAC rule 3745-18-06(A)
		OAC rule 3745-21-08
		OAC rule 3745-23-06(B)
		OAC rule 3745-31-05(C) Synthetic Minor to avoid Major Modification New Source Review

Miami**PTI A**Emissions Unit ID: **P001****Issued: To be entered upon final issuance**

Applicable Emissions Limitations/Control Measures	pursuant to OAC rule 3745-31-05(A)(3).
8.9 lbs NO _x /hr	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
3.3 lbs CO/hr	
3.2 lbs VOC/hr	
0.88 lbs PE/PM ₁₀ /hr	
0.03 lbs SO ₂ /hr	Exempt
Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule.	See term A.I. 2.c.
See term A.I.2.a and A.II.1	See term A.I. 2.d.
The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-08, OAC rule 3745-23-06(B), and OAC rule 3745-31-05(C).	
The following emission limits are based on a rolling, 12-month summation:	
15.5 TPY NO _x	
5.75 TPY CO	
5.55 TPY VOC	
1.55 TPY PE/PM ₁₀	
0.05 TPY SO ₂	
See term A.II.2	
The emission limitation specified by this rule is less stringent than the emission limitation established	

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

- 2.a** The emissions unit shall be equipped with a catalytic oxidation system maintained and operated as follows, except during periods of startup, shutdown, and malfunction:
- i. all emissions are vented to the catalytic oxidation system,
 - ii. the mass emissions of CO from the emissions unit are reduced by 93 percent or more,
 - iii. the catalyst inlet temperature is greater than or equal to 450 degrees F and less than or equal to 1350 degrees F,
 - iv. the 4-hour rolling average catalyst inlet temperature is maintained within the operating limitations for the catalyst inlet temperature established during the most recent performance test that demonstrated the emissions unit was in compliance, and
 - v. the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the most recent performance test that demonstrated the emissions unit was in compliance.
- 2.b** The hourly emission limitations outlined in term A.I.1. for NO_x, CO, VOC, PE/PM₁₀, and SO₂ are based on the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.c** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by committing to comply with the best available technology requirements established in Permit to Install 14-05536.
- On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.
- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best

available technology requirements established in Permit to Install 14-05536.

- 2.e Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of a catalytic oxidation emission control system, the use of natural gas fuel and compliance with the emission limitations, opacity limitations and operating hours restriction.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The maximum annual operating hours for this emissions unit shall not exceed 3,500 hours, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Operating Hours</u>
1	350
1-2	700
1-3	1050
1-4	1400
1-5	1750
1-6	2100
1-7	2450
1-8	2800
1-9	3150
1-10	3500
1-11	3500
1-12	3500

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

III. 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 measure and record once per month the pressure drop across the catalyst to demonstrate that the pressure drop is within the operating limitation established during the most recent performance test.

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3. The permittee shall maintain monthly records of the following information for this emissions unit in order to monitor compliance with the applicable operating hours restriction:
 - a. the operating hours for each month; and
 - b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

4. The permittee shall maintain monthly records of the following information for this emissions unit in order to monitor compliance with the rolling, 12-month summation emission limitations:
 - a. the total emissions, in tons, for NO_x, CO, VOC, PE/PM₁₀, and SO₂ for each month; and
 - b. the updated rolling, 12-month summation emissions total, in tons, for NO_x, CO, VOC, PE/PM₁₀, and SO₂ (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months). For the first twelve months following the issuance of the permit, this shall be a cumulative total of all months since the issuance of the PTI.
5. Continuous Parameter Monitoring System (CPMS)
 - a. The permittee shall install, operate, and maintain equipment to continuously monitor and record catalyst inlet temperature on this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 63.8.
 - c. The permittee shall maintain records of all data obtained by the CPMS including, but not limited to, catalyst inlet temperature in degrees Fahrenheit, catalyst inlet temperature in degrees Fahrenheit in the appropriate averaging period (e.g., 4-hour rolling average), and results of daily CPMS response checks.
 - b. Within 180 days of the effective date of the permit, the permittee shall develop, implement, and maintain a written startup, shutdown, and malfunction plan for the CPMS as specified in 40 CFR Part 63.8 and 40 CFR Part 63.6(e)(3). Records related to startup, shutdown, and malfunctions shall be maintained as specified in 40 CFR Part 63.6(e)(3) and 40 CFR Part 63.10(b) and (c).
 - f. Within 180 days of the effective date of the permit, the permittee shall develop a written

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quality assurance/quality control plan for the continuous monitoring system designed to ensure continuous valid and representative readings, including daily and periodic data quality checks and performance testing of the continuous monitoring system. The plan shall follow the requirements of 40 CFR Part 63.8 and 40 CFR Part 63.10(b) and (c). The quality assurance/quality control plan, related records, and a logbook dedicated to the continuous monitoring system must be kept on site and available for inspection during regular office hours.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the following:
 - a. an identification of all exceedances of the rolling 12-month operating hours restriction;
 - b. an identification of all exceedances of the rolling 12-month emission limitations for NO_x, CO, VOC, PE/PM₁₀, and SO₂;
 - c. an identification of all exceedances of the measured catalyst pressure drop limitation as specified in Section A.2.a.v.; and
 - d. an identification of all deviations of the 4-hour rolling average catalyst inlet temperature as specified in Sections A.2.a.iii. and A.2.a.iv.
3. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions A.1.c.ii. unless otherwise specified.
4. The permittee shall submit deviation reports within 30 days following the end of each calendar quarter to the Hamilton County Department of Environmental Services-Air Quality Management Division documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances where the catalytic oxidation system did not comply with 40 CFR Part 63 or any limitation(s) specified in the terms and conditions of this permit, in units of the standard.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Hamilton County Department of Environmental Services-Air Quality Management Division documenting any continuous monitoring system downtime and out-of-control time periods while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the continuous monitoring system while the emissions unit was on line

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shall be included in the quarterly report. The identification of each parameter monitored, a brief description of the emissions unit, a brief description of the continuous monitoring system, the date of the latest performance test, and a description of any changes in the continuous monitoring system, processes, or controls since the last reporting period shall also be included in the quarterly report.

If there are no deviations and no periods where the continuous monitoring system is out-of-control during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. Startup, shutdown, and malfunction information as specified in 40 CFR Part 63.10(d)(5)(i) shall be included in the report. The total operating time of the emissions unit and the total operating time of the continuous monitoring system while the emissions unit was on line shall also be included in the quarterly report. These quarterly compliance reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

5. The permittee shall submit annual reports that specify the total NO_x, CO, VOC, PE/PM₁₀, and SO₂ emissions from this emissions unit for the calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

1. Compliance with the emission limitations and operating limitations specified in Sections A.I. and A.II. shall be determined by the following methods:
 - a. Emission Limitation(s):
 - 8.9 lbs NO_x/hr
 - 3.3 lbs CO/hr
 - 3.2 lbs VOC/hr
 - 0.88 lb PE/PM₁₀/hr
 - 0.03 lb SO₂/hr

Applicable Compliance Method: The hourly emission limitations are based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data found in PTI 14-05536 submitted February 6, 2004.

Compliance with the CO emission limitation shall be determined by the continuous parametric monitoring data collected pursuant to the record keeping requirements

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specified in Section A.III.5. and based upon the results of the emission testing required in Section V.2. and Section V.3. below.

The permittee shall demonstrate compliance with the hourly NO_x emission limitation based upon the results of the emission testing required in Section V.2. below.

The permittee shall demonstrate compliance with the hourly VOC emission limitation based upon the results of the emission testing required in Section V.2. below.

If required, the permittee shall demonstrate compliance with the hourly PE/PM₁₀ emission limitation through emission tests performed in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

If required, the permittee shall demonstrate compliance with the hourly SO₂ emission limitation through emission tests performed in accordance with Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.

- b. Emission Limitation(s):
15.5 TPY NO_x*
5.75 TPY CO*
5.55 TPY VOC*
1.55 TPY PE/PM₁₀*
0.05 TPY SO₂*

*These emission limitations are per rolling, 12-month period

Applicable Compliance Method: Compliance with the annual NO_x, CO, VOC, PE/PM₁₀, and SO₂ emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.4.

- c. Emission Limitation:
Visible PE from any stack shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method: If required, compliance with the visible PE limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- e. Operating Hours Restriction:
3,500 operating hours, per rolling, 12-month period

Applicable Compliance Method: Compliance with the rolling 12-month operating hours restriction specified above shall be determined by the record keeping requirements specified in Section A.III.3.

2. The permittee shall conduct, or have conducted, initial emissions testing for this emissions unit in

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accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after issuance of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the volatile organic compound, nitrogen oxide and carbon monoxide emission limits and the percent carbon monoxide reduction requirement from the catalytic oxidation system.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for volatile organic compounds, Method 25 of 40 CFR Part 60, Appendix A; for nitrogen oxide Method 7 of 40 CFR Part 60, Appendix A; for carbon monoxide, Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.
- d. The control efficiency (i.e. the percent reduction in carbon monoxide mass emissions between the inlet and outlet of the catalytic oxidation system) shall be determined in accordance with the test methods and procedures specified in ASTM D6522-00 or Methods 3A and Method 10 of 40 CFR Part 60, Appendix A.
- e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity within plus or minus 10 percent of 100 percent load, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- f. The catalyst pressure drop and catalyst inlet temperature shall be recorded during the test(s).

Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "Intent to test" notification to the appropriate Ohio EPA District Office or local air agency.

The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to

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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 performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

3. The permittee shall conduct, or have conducted, subsequent emissions testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted on a semiannual basis by June 30 and December 31 of each year.
 - b. The emission testing shall be conducted to demonstrate compliance with the carbon monoxide emission limits and the percent carbon monoxide reduction requirement from the catalytic oxidation system.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for carbon monoxide, Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.
 - d. The control efficiency (i.e. the percent reduction in carbon monoxide mass emissions between the inlet and outlet of the catalytic oxidation system) shall be determined in accordance with the test methods and procedures specified in ASTM D6522-00 or Methods 3A and Method 10 of 40 CFR Part 60, Appendix A.
 - e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity within plus or minus 10 percent of 100 percent load, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - f. The catalyst pressure drop and catalyst inlet temperature shall be recorded during the test(s).

Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "Intent to test" notification to the appropriate Ohio EPA District Office or local air agency.

The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 District Office's or local air agency's refusal to accept the results of the emission

test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency 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 performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

Upon demonstration of compliance for two consecutive emissions tests, the permittee may reduce the frequency of subsequent performance tests to annually with prior approval from the appropriate Ohio EPA District Office or local air agency. If the result of any subsequent annual emission test indicates the emissions unit is not in compliance with the CO emission limitation or control efficiency requirement, semiannual emissions testing shall be resumed.

VI. Miscellaneous Requirements

1. None

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PTI A

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P001 - 5732 KW Lean Burn Natural Gas Fired 4-stroke Reciprocating Engine		See term B.III.1.

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit P001 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Propane

TLV (ug/m3): 4,508,000

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Maximum Hourly Emission Rate (lbs/hr): 0.497

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 37.93

MAGLC (ug/m3): 107,333

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

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied with the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

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

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. when the computer modeling is performed, a copy of the resulting computer model runs

that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

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VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P002 - 5732 KW Lean Burn Natural Gas Fired 4-stroke Reciprocating Engine	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-07(A)(1)
		OAC rule 3745-17-11(B)(5)(b)
		OAC rule 3745-18-06(A)
		OAC rule 3745-21-08
		OAC rule 3745-23-06(B)
	OAC rule 3745-31-05(C) Synthetic Minor to avoid Major Modification New Source Review	

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Applicable Emissions Limitations/Control Measures	pursuant to OAC rule 3745-31-05(A)(3).
8.9 lbs NO _x /hr	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
3.3 lbs CO/hr	
3.2 lbs VOC/hr	
0.88 lbs PE/PM ₁₀ /hr	
0.03 lbs SO ₂ /hr	
See term A.I.2.a and A.II.1	Exempt
Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule.	See term A.I. 2.c.
The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-08, OAC rule 3745-23-06(B), and OAC rule 3745-31-05(C).	See term A.I. 2.d.
The following emission limits are based on a rolling, 12-month summation: 15.5 TPY NO _x 5.75 TPY CO 5.55 TPY VOC 1.55 TPY PE/PM ₁₀ 0.05 TPY SO ₂	
See term A.II.2	
The emission limitation specified by this rule is less stringent than the emission limitation established	

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2. Additional Terms and Conditions

- 2.a** The emissions unit shall be equipped with a catalytic oxidation system maintained and operated as follows, except during periods of startup, shutdown, and malfunction:
- i. all emissions are vented to the catalytic oxidation system,
 - ii. the mass emissions of CO from the emissions unit are reduced by 93 percent or more,
 - iii. the catalyst inlet temperature is greater than or equal to 450 degrees F and less than or equal to 1350 degrees F,
 - iv. the 4-hour rolling average catalyst inlet temperature is maintained within the operating limitations for the catalyst inlet temperature established during the most recent performance test that demonstrated the emissions unit was in compliance, and
 - v. the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the most recent performance test that demonstrated the emissions unit was in compliance.
- 2.b** The hourly emission limitations outlined in term A.I.1. for NO_x, CO, VOC, PE/PM₁₀, and SO₂ are based on the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.c** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by committing to comply with the best available technology requirements established in Permit to Install 14-05536.
- On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.
- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best

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available technology requirements established in Permit to Install 14-05536.

- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of a catalytic oxidation emission control system, the use of natural gas fuel and compliance with the emission limitations, opacity limitations and operating hours restriction.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The maximum annual operating hours for this emissions unit shall not exceed 3,500 hours, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Operating Hours</u>
1	350
1-2	700
1-3	1050
1-4	1400
1-5	1750
1-6	2100
1-7	2450
1-8	2800
1-9	3150
1-10	3500
1-11	3500
1-12	3500

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

III. 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 measure and record once per month the pressure drop across the catalyst to demonstrate that the pressure drop is within the operating limitation established during the most recent performance test.
3. The permittee shall maintain monthly records of the following information for this emissions unit in order to monitor compliance with the applicable operating hours restriction:

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- a. the operating hours for each month; and
- b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

4. The permittee shall maintain monthly records of the following information for this emissions unit in order to monitor compliance with the rolling, 12-month summation emission limitations:
 - a. the total emissions, in tons, for NO_x, CO, VOC, PE/PM₁₀, and SO₂ for each month; and
 - b. the updated rolling, 12-month summation emissions total, in tons, for NO_x, CO, VOC, PE/PM₁₀, and SO₂ (the total amount of emissions for the current month plus the total amount of emissions for the previous eleven calendar months). For the first twelve months following the issuance of the permit, this shall be a cumulative total of all months since the issuance of the PTI.
5. Continuous Parameter Monitoring System (CPMS)
 - a. The permittee shall install, operate, and maintain equipment to continuously monitor and record catalyst inlet temperature on this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 63.8.
 - c. The permittee shall maintain records of all data obtained by the CPMS including, but not limited to, catalyst inlet temperature in degrees Fahrenheit, catalyst inlet temperature in degrees Fahrenheit in the appropriate averaging period (e.g., 4-hour rolling average), and results of daily CPMS response checks.
 - b. Within 180 days of the effective date of the permit, the permittee shall develop, implement, and maintain a written startup, shutdown, and malfunction plan for the CPMS as specified in 40 CFR Part 63.8 and 40 CFR Part 63.6(e)(3). Records related to startup, shutdown, and malfunctions shall be maintained as specified in 40 CFR Part 63.6(e)(3) and 40 CFR Part 63.10(b) and (c).
 - f. Within 180 days of the effective date of the permit, the permittee shall develop a written quality assurance/quality control plan for the continuous monitoring system designed to ensure continuous valid and representative readings, including daily and periodic data

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quality checks and performance testing of the continuous monitoring system. The plan shall follow the requirements of 40 CFR Part 63.8 and 40 CFR Part 63.10(b) and (c). The quality assurance/quality control plan, related records, and a logbook dedicated to the continuous monitoring system must be kept on site and available for inspection during regular office hours.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the following:
 - a. an identification of all exceedances of the rolling 12-month operating hours restriction;
 - b. an identification of all exceedances of the rolling 12-month emission limitations for NO_x, CO, VOC, PE/PM₁₀, and SO₂;
 - c. an identification of all exceedances of the measured catalyst pressure drop limitation as specified in Section A.2.a.v.; and
 - d. an identification of all deviations of the 4-hour rolling average catalyst inlet temperature as specified in Sections A.2.a.iii. and A.2.a.iv.
3. The deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions A.1.c.ii. unless otherwise specified.
4. The permittee shall submit deviation reports within 30 days following the end of each calendar quarter to the Hamilton County Department of Environmental Services-Air Quality Management Division documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances where the catalytic oxidation system did not comply with 40 CFR Part 63 or any limitation(s) specified in the terms and conditions of this permit, in units of the standard.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Hamilton County Department of Environmental Services-Air Quality Management Division documenting any continuous monitoring system downtime and out-of-control time periods while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the continuous monitoring system while the emissions unit was on line shall be included in the quarterly report. The identification of each parameter monitored, a brief

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description of the emissions unit, a brief description of the continuous monitoring system, the date of the latest performance test, and a description of any changes in the continuous monitoring system, processes, or controls since the last reporting period shall also be included in the quarterly report.

If there are no deviations and no periods where the continuous monitoring system is out-of-control during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. Startup, shutdown, and malfunction information as specified in 40 CFR Part 63.10(d)(5)(i) shall be included in the report. The total operating time of the emissions unit and the total operating time of the continuous monitoring system while the emissions unit was on line shall also be included in the quarterly report. These quarterly compliance reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall address the data obtained during the previous calendar quarter.

5. The permittee shall submit annual reports that specify the total NO_x, CO, VOC, PE/PM₁₀, and SO₂ emissions from this emissions unit for the calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

1. Compliance with the emission limitations and operating limitations specified in Sections A.I. and A.II. shall be determined by the following methods:
 - a. Emission Limitation(s):
 - 8.9 lbs NO_x/hr
 - 3.3 lbs CO/hr
 - 3.2 lbs VOC/hr
 - 0.88 lb PE/PM₁₀/hr
 - 0.03 lb SO₂/hr

Applicable Compliance Method: The hourly emission limitations are based upon the emission unit's potential to emit and the manufacturer's guaranteed emissions data found in PTI 14-05536 submitted February 6, 2004.

Compliance with the CO emission limitation shall be determined by the continuous parametric monitoring data collected pursuant to the record keeping requirements specified in Section A.III.5. and based upon the results of the emission testing required in

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Section V.2. and Section V.3. below.

The permittee shall demonstrate compliance with the hourly NO_x emission limitation based upon the results of the emission testing required in Section V.2. below.

The permittee shall demonstrate compliance with the hourly VOC emission limitation based upon the results of the emission testing required in Section V.2. below.

If required, the permittee shall demonstrate compliance with the hourly PE/PM₁₀ emission limitation through emission tests performed in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

If required, the permittee shall demonstrate compliance with the hourly SO₂ emission limitation through emission tests performed in accordance with Methods 1-4 and 6 of 40 CFR Part 60, Appendix A.

- b. Emission Limitation(s):
15.5 TPY NO_x*
5.75 TPY CO*
5.55 TPY VOC*
1.55 TPY PE/PM₁₀*
0.05 TPY SO₂*

*These emission limitations are per rolling, 12-month period

Applicable Compliance Method: Compliance with the annual NO_x, CO, VOC, PE/PM₁₀, and SO₂ emission limitations specified above shall be determined by the record keeping requirements specified in Section A.III.4.

- c. Emission Limitation:
Visible PE from any stack shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method: If required, compliance with the visible PE limitation shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- e. Operating Hours Restriction:
3,500 operating hours, per rolling, 12-month period

Applicable Compliance Method: Compliance with the rolling 12-month operating hours restriction specified above shall be determined by the record keeping requirements specified in Section A.III.3.

2. The permittee shall conduct, or have conducted, initial emissions testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 60 days after achieving the maximum

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production rate but no later than 180 days after issuance of this permit.

- b. The emission testing shall be conducted to demonstrate compliance with the volatile organic compound, nitrogen oxide and carbon monoxide emission limits and the percent carbon monoxide reduction requirement from the catalytic oxidation system.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for volatile organic compounds, Method 25 of 40 CFR Part 60, Appendix A; for nitrogen oxide Method 7 of 40 CFR Part 60, Appendix A; for carbon monoxide, Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.
- d. The control efficiency (i.e. the percent reduction in carbon monoxide mass emissions between the inlet and outlet of the catalytic oxidation system) shall be determined in accordance with the test methods and procedures specified in ASTM D6522-00 or Methods 3A and Method 10 of 40 CFR Part 60, Appendix A.
- e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity within plus or minus 10 percent of 100 percent load, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
- f. The catalyst pressure drop and catalyst inlet temperature shall be recorded during the test(s).

Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "Intent to test" notification to the appropriate Ohio EPA District Office or local air agency.

The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency 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 performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

3. The permittee shall conduct, or have conducted, subsequent emissions testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted on a semiannual basis by June 30 and December 31 of each year.
 - b. The emission testing shall be conducted to demonstrate compliance with the carbon monoxide emission limits and the percent carbon monoxide reduction requirement from the catalytic oxidation system.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for carbon monoxide, Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.
 - d. The control efficiency (i.e. the percent reduction in carbon monoxide mass emissions between the inlet and outlet of the catalytic oxidation system) shall be determined in accordance with the test methods and procedures specified in ASTM D6522-00 or Methods 3A and Method 10 of 40 CFR Part 60, Appendix A.
 - e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity within plus or minus 10 percent of 100 percent load, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - f. The catalyst pressure drop and catalyst inlet temperature shall be recorded during the test(s).

Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "Intent to test" notification to the appropriate Ohio EPA District Office or local air agency.

The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions units 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 District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency 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

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characterization of the emissions from the emissions unit and/or performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

Upon demonstration of compliance for two consecutive emissions tests, the permittee may reduce the frequency of subsequent performance tests to annually with prior approval from the appropriate Ohio EPA District Office or local air agency. If the result of any subsequent annual emission test indicates the emissions unit is not in compliance with the CO emission limitation or control efficiency requirement, semiannual emissions testing shall be resumed.

VI. Miscellaneous Requirements

1. None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P002 - 5732 KW Lean Burn Natural Gas Fired 4-stroke Reciprocating Engine		See term B.III.1

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit P002 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model(or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Propane

TLV (ug/m3): 4,508,000

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Maximum Hourly Emission Rate (lbs/hr): 0.497

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 37.93

MAGLC (ug/m3): 107,333

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

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled: and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
2. If the permittee determines that the "Air Toxic Policy" will be satisfied with the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.
- The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the Air Toxic Policy:"
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of it's evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. when the computer modeling is performed, a copy of the resulting computer model runs

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that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

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VI. Miscellaneous Requirements

None