



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
CUYAHOGA COUNTY**

CERTIFIED MAIL

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 13-04567

Fac ID: 1318120179

DATE: 12/2/2005

Ford Cleveland Engine Plants
James Hostacky
18300 Five Points Road
Brook Park, OH 44142

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

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.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 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. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

CLAA



**Permit To Install
Terms and Conditions**

**Issue Date: 12/2/2005
Effective Date: 12/2/2005**

FINAL PERMIT TO INSTALL 13-04567

Application Number: 13-04567
Facility ID: 1318120179
Permit Fee: **\$200**
Name of Facility: Ford Cleveland Engine Plants
Person to Contact: James Hostacky
Address: 18300 Five Points Road
Brook Park, OH 44142

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

**17601 Brook Park
Brook Park, Ohio**

Description of proposed emissions unit(s):

Replacement of the P245 Dynamometer present thermal oxidizer by a higher capacity and recuperative thermal oxidizer

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

Part I - GENERAL TERMS AND CONDITIONS

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

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the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See 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 (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - iv. If this permit is for an emissions unit located at a Title V facility, then each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

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

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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 any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

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 its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. 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 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.

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- 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 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 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.

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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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13. Permit-To-Install

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this permit.

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

1. Compliance Requirements

The emissions unit(s) identified in this Permit 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 (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder.

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The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

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4. Authorization To Install or Modify

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or 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 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)

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

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 application must be made to the Director for the installation or modification of any other emissions unit(s).

8. Construction Compliance Certification

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If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the 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., postmarked), 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	130.5 *
CO	120.5 *
OC/VOC	8.3
PE/PM ₁₀	4.1
SO ₂	3.2

*** Note:** The permittee has proposed that the amount of emissions increase, which is the difference between the future projected actual emissions and current actual emissions, as a result of this modification will be less than 40 tons NOx/year and 100 tons CO/year. In accordance with OAC rule 3745-31-10(C)(3), the permittee will have to maintain records for the next 10 years that demonstrate that the amount of actual emissions increase stays below

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these major modification thresholds since the potential to emit for this emissions unit has increased as a result of this modification.

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

None

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

None

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>
<p>PTI 13-03495 issued on 01/18/2001 and PTI 13-2363 issued on 11/06/1991.</p> <p>P245 - This PTI is for the modification of emissions unit P245 to allow the capacity of testing larger (3.5 liter) engines and to provide a larger thermal (recuperative) oxidizer to control the resulting engine exhaust emissions. CEP 2 dynamometer internal combustion (unleaded gasoline) engine test facility consists of 3 engine test laboratory cells, a B & A Body and Assembly Cell (2 hours/week for testing returned engines), a recuperative thermal oxidizer and an interlock.</p> <p>Modification #2</p> <p>The terms of this permit supercede the terms of</p>	<p>OAC rule 3745-31-05(A)(3)</p> <p>OAC rule 3745-17-07(A)</p> <p>OAC rule 3745-17-11(B)(1)</p> <p>OAC rule 3745-18-06(G)</p>

	<u>Applicable Emissions Limitations/Control Measures</u>	
OAC rule 3745-21-08(B)	Emissions of organic compounds/VOCs shall not exceed 1.9 pound/hour and 8.3	See Section A.I.2.e below.
OAC rule 3745-23-06(B)	tons/year.	See Section A.I.2.f below.
OAC rule 3745-31-10(C)(1) "Future Projected Actual" emissions	Emissions of nitrogen oxides shall not exceed 29.8 pounds/hour and 130.5 tons/year. See Section A.I.2.a below.	See Section A.I.2.a below.
	Emissions of carbon monoxide shall not exceed 27.5 pounds/hour and 120.5 tons/year.	
	PE/PM ₁₀ emissions shall not exceed 0.92 lb/hr and 4.1 tons/year.	
	Emissions of Sulfur Dioxide shall not exceed 0.73 lb/hr and 3.2 tons/year.	
	See Sections A.I.2.b and A.II.1 below.	
	See Section A.I.2.c below.	
	See Section A.I.2.d below.	
	The emission limitation established by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).	

2. Additional Terms and Conditions

- 2.a** The permittee has proposed that the amount of emissions increase, which is the difference between the future projected actual emissions and current actual emissions, as a result of this modification will be less than 40 tons NO_x/year and 100 tons CO/year. In accordance with OAC rule 3745-31-10(C)(3), the permittee will have to maintain records for the next 10 years that demonstrate that the amount of actual emissions increase stays below these major modification thresholds since the potential to emit for this emissions unit has increased as a result of this modification.
- 2.b** Engine exhaust CO emissions from this emissions unit shall be incinerated at not less than 1400 degrees Fahrenheit for 0.3 (by design) second or longer in a natural gas-fired direct-flame (recuperative) thermal oxidizer that achieves a minimum 95%, by weight, control (destruction) efficiency of the CO emissions when operated at maximum production conditions. The thermal oxidizer shall be equipped with a continuous temperature monitor with visual readout at the operators work station, recorder, controller, and an interlocking device.
- In order to ensure that all engine exhaust CO emissions from this emissions unit are incinerated at not less than 1400 degrees Fahrenheit, the permittee shall utilize an interlock system associated with the thermal oxidizer's combustion temperature. If the thermal oxidizer's combustion temperature drops below 1400 degrees Fahrenheit, then the emissions unit shall be shutdown until the thermal oxidizer's combustion temperature is above 1400 degrees Fahrenheit.
- 2.c** 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.
- 2.d** 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*.

* The only material introduced into the process is unleaded gasoline which is solely used as fuel for the purpose of combustion.

Emissions Unit ID: P245

- 2.e** The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

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. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision 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.f** The permittee shall satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06 by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On February 15, 2005, OAC rule 3745-23-06 was rescinded; therefore, this rule is no longer part of the State regulations. This rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Until the U.S. EPA approves the revision to OAC rule 3745-23-06, the requirement to satisfy the "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

II. Operational Restrictions

1. The average combustion chamber temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 1,400 degrees Fahrenheit.
2. The permittee shall operate and maintain an interlocking device that does not allow any dynamometer to startup or operate unless the thermal oxidizer temperature is maintained at no less than 1,400 degrees Fahrenheit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor, recorder

(either electronic or paper), and controller which measures, records (at least once every 15 minutes), and controls the thermal oxidizer combustion chamber temperature, in degrees Fahrenheit, when the emissions unit is in operation. The monitoring, recording, and controlling devices shall be capable of accurately measuring, recording, and controlling the desired parameter. The temperature monitor, recorder, and controller shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

2. The permittee shall maintain daily records of the thermal oxidizer combustion chamber temperature, in degrees Fahrenheit, when the emissions unit was in operation. (It shall not be considered a deviation of this monitoring requirement if the ink does not mark on the paper and the interlock is functioning properly.)

The permittee shall collect and record the following information for each day:

- a. all 3-hour blocks of time during which the average combustion chamber temperature within the thermal oxidizer, when the emissions unit was in operation, was less than 1400 degrees Fahrenheit; and
 - b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
3. The permittee shall maintain a log of the activation of the interlock system when the emissions unit is not shut down. This log shall include the date, time and duration of each such period.
 4. The permittee shall, on a quarterly basis, test the interlock system to ensure that the emissions unit does shut down when the thermal oxidizer's combustion chamber temperature drops below 1400 degrees Fahrenheit. The permittee shall maintain records of the quarterly tests of the interlock system.
 5. In accordance with OAC rule 3745-31-10(C)(3), the permittee shall maintain annual records for ten years after the issuance of this permit of the following:
 - a. the gallons of unleaded gasoline consumed; and
 - b. the total NO_x emissions for this emissions unit, calculated by multiplying the NO_x emission factor established during the most recent emission test that demonstrated that the emissions unit was in compliance by the monthly value

from A.III.5.a, in tons/year.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports to the Cleveland Division of Air Quality (Cleveland DAQ) that identify all periods of time when the interlock system was activated and the emissions unit was not shut down.
2. The permittee shall submit temperature deviation (excursion) reports to the Cleveland DAQ that identify all 3-hour blocks of time during which the combustion chamber temperature within the thermal oxidizer did not comply with the temperature limitation specified above.
3. The permittee shall submit annual reports to the Cleveland DAQ that specify the total emissions of OC, VOC, NO_x, CO, PE/PM-10, and SO₂ from this emissions unit for the previous calendar year. The 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
4. In accordance with OAC rule 3745-31-10(C)(5), the permittee shall submit a deviation report to the Cleveland DAQ if the actual annual emissions, in tons/year, exceed the baseline actual emissions by a significant amount for NO_x and CO as noted in Section A.I.2.a above and if such emissions differ from the preconstruction projection as documented and maintained pursuant to OAC rule 3745-31-10(C)(1)(c). Such report shall be submitted within 60 days after the end of such year. This condition will remain in effect for ten years after the issuance date of this permit.
4. The permittee shall submit the required reports in accordance with the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
OC/VOC emissions shall not exceed 1.9 lbs OC/VOC/hr.

Applicable Compliance Method:

The hourly OC/VOC emission limitation was developed by adding the OC/VOC contributions made by the combustion of gasoline in the dynamometer and the combustion of natural gas in the oxidizer. The contribution by the dynamometer,

1.8 lb/hr, was obtained by multiplying the AP- 42 emission factor 2.1 lb/MMBTU by the heat content of gasoline 0.13 MMBTU/gal and multiplying the product, 0.273 lb/gal, by the theoretical maximum 65.9 gal/hr gasoline consumed in the dynamometer, and then multiplying by (1 - 0.9) to account for the estimated 90% control efficiency of the thermal oxidizer. The contribution by the oxidizer, 0.01 lb/hr, was obtained by dividing the AP- 42 emission factor 11 lb/MMscf by the heat content of natural gas, 1050 MMBTU/MMscf, and multiplying the quotient, 0.0105 lb/MMBTU, by the maximum heating capacity of the oxidizer 8.0 MMBTU/hr. Adding 1.8 and 0.1 gives 1.9 lbs/hr. Future emission calculations shall be done by multiplying a test-derived emission factor from the most recent stack test, in lbs OC/VOC/gal representing the controlled emission rate, by the actual amount of fuel consumed.

The permittee shall demonstrate compliance with the above value of pound OC/hour by emission testing in accordance with Methods 1 through 4 and 25 or 25A, 40 CFR Part 60, Appendix A. See Section A.V.2.

- b. Emission Limitation:
OC/VOC emissions shall not exceed 8.3 tons/year.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

- c. Emission Limitation:
NOx emissions shall not exceed 29.8 lbs/hr.

Applicable Compliance Method:

The hourly NOx emission limitation was developed by adding the NOx contributions made by the combustion of gasoline in the dynamometer and the combustion of natural gas in the oxidizer. The contribution by the dynamometer, 29 lbs/hr, was obtained by multiplying the stack test emission factor, currently 0.44 lb NOx/gallon of unleaded gas consumed, by the theoretical maximum 65.9 gal/hr gasoline consumed in the dynamometer. The contribution by the oxidizer, 0.8 lb/hr, was obtained by dividing the AP- 42 emission factor 100 lb/MMscf by the heat content of natural gas, 1050 MMBTU/MMscf, and multiplying the quotient, 0.0952 lb/MMBTU, by the maximum heating capacity of the oxidizer 8.0 MMBTU/hr. Adding 29 and 0.8 gives 29.8 lbs/hr. The emission factor is from a

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stack test performed on November 21, 2003.

The permittee shall demonstrate compliance with the above value of pound NO_x/hour by emission testing in accordance with Methods 1 through 4 and 7, 40 CFR Part 60, Appendix A. See Section A.V.2.

- d. Emission Limitation:
NO_x emissions shall not exceed 130.5 tons per year.

Applicable Compliance Method:

Actual emissions shall be determined by multiplying the test-derived emission factor from the most recent stack test, in lbs of NO_x/gallon of unleaded gasoline consumed, by the actual annual amount of unleaded gasoline consumed, and multiplying the product by 1 ton/2000 pounds. The current emission factor is 0.44 lb of NO_x/gallon of unleaded gasoline consumed determined from the November 21, 2003 stack test.

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

- e. Emission Limitation:
CO emissions shall not exceed 27.5 lbs/hr.

Applicable Compliance Method:

The hourly CO emission limitation was developed by adding the CO contributions made by the combustion of gasoline in the dynamometer and the combustion of natural gas in the oxidizer. The contribution by the dynamometer, 26.9 lb/hr, was obtained by multiplying the AP-42 emission factor 62.7 lb/MMBTU by the heat content of gasoline 0.13 MMBTU/gal and multiplying the product, 8.151 lb/gal, by the theoretical maximum 65.9 gal/hr gasoline consumed in the dynamometer, and then multiplying by (1 - 0.95) to account for 95% control efficiency of the thermal oxidizer. The contribution by the oxidizer, 0.6 lb/hr, was obtained by dividing the AP-42 emission factor 84 lb/MMscf by the heat content of natural gas, 1050 MMBTU/MMscf, and multiplying the quotient, 0.08 lb/MMBTU, by the maximum heating capacity of the oxidizer 8.0 MMBTU/hr. Adding 26.9 and 0.6 gives 27.5 lbs/hr. Future emission calculations shall be done by multiplying a test-derived emission factor from the most recent stack test, in lbs CO/gal representing the controlled emission rate, by the actual amount of fuel consumed.

The permittee shall demonstrate compliance with the above value of pound CO/hour by emission testing in accordance Methods 1 through 4 and 10, 40 CFR Part 60, Appendix A. See Section A.V.2.

- f. Emission Limitation:
CO emissions shall not exceed 120.5 tons/year.

Applicable Compliance Method:

Actual emissions shall be determined by multiplying the test-derived emission factor from the most recent stack test, in lbs of CO/gallon of unleaded gasoline consumed, by the actual annual amount of unleaded gasoline consumed, and multiplying the product by 1 ton/2000 pounds.

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

- g. Emission Limitation:
PE/PM₁₀ emissions shall not exceed 0.92 lb/hr.

Applicable Compliance Method:

The hourly PE/PM₁₀ emission limitation was developed by adding the PE/PM₁₀ contributions made by the combustion of gasoline in the dynamometer and the combustion of natural gas in the oxidizer. The contribution by the dynamometer, 0.86 lb/hr, was obtained by multiplying the AP- 42 emission factor 0.1 lb/MMBTU by the heat content of gasoline 0.13 MMBTU/gal and multiplying the product, 0.013 lb/gal, by the theoretical maximum 65.9 gal/hr gasoline consumed in the dynamometer. The contribution by the oxidizer, 0.06 lb/hr, was obtained by dividing the AP- 42 emission factor 7.6 lb/MMscf by the heat content of natural gas, 1050 MMBTU/MMscf, and multiplying the quotient, 0.007238 lb/MMBTU, by the maximum heating capacity of the oxidizer 8.0 MMBTU/hr. Adding 0.86 and 0.06 gives 0.92 lb/hr.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing using Methods 1 through 4 and 5, of 40 CFR Part 60, Appendix A.

- h. Emission Limitation:
PE/PM₁₀ emissions shall not exceed 4.1 tons/year.

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Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

i. **Emission Limitation:**

Emissions of Sulfur Dioxide shall not exceed 0.73 lb/hr.

Applicable Compliance Method:

The hourly SO₂ emission limitation was developed by adding the SO₂ contributions made by the gasoline combustion in the dynamometer and the natural gas combustion in the oxidizer. The contribution by the dynamometer, 0.72 lb/hr, was obtained by multiplying the AP-42 emission factor 0.084 lb/MMBTU by the heat content of gasoline 0.13 MMBTU/gal and multiplying the product, 0.011 lb/gal, by the theoretical maximum 65.9 gal/hr gasoline consumed in the dynamometer. The contribution by the oxidizer, 0.005 lb/hr, was obtained by dividing the AP-42 emission factor 0.6 lb/MMscf by the heat content of natural gas, 1050 MMBTU/MMscf, and multiplying the quotient, 0.0006 lb/MMBTU, by the maximum heating capacity of the oxidizer 8.0 MMBTU/hr. Adding 0.72 and 0.005 gives 0.73 lb/hr.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing using Methods 1 through 4 and 6, of 40 CFR Part 60, Appendix A.

j. **Emission Limitation:**

Emissions of Sulfur Dioxide shall not exceed 3.2 tons/year.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8760 hours of operation per year and dividing by 2000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

Note: The above AP-42 emission factors were obtained from U.S. EPA's "Compilation of Air Pollutant Emission Factors", Fifth Edition, Chapter 1.4 (July 1998) for natural gas combustion associated with the oxidizer and Chapter 3.3 (October 1996) for combustion of gasoline in the engines.

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

in accordance with the following requirements:

The emission testing shall be conducted within 12 months after issuance of this permit.

The emission testing shall be conducted to demonstrate compliance with the hourly allowable mass emission limitations for NO_x, OC, and CO and to demonstrate compliance with the required thermal oxidizer control (destruction) efficiencies for CO at normal maximum production. The emission testing shall also be used to validate or reestablish the test-derived emission factors, representing the controlled emission rate in lbs pollutant/gallon of fuel consumed, to demonstrate annualized compliance.

The test(s) shall be conducted while the emissions unit is operating at or near its normal maximum capacity, unless otherwise specified or approved by the Cleveland DAQ.

The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates and to determine actual control (destruction) efficiencies:

NO_x: Methods 1 through 4 and 7, of 40 CFR Part 60, Appendix A;

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

OC: Methods 1 through 4 and 18, 25, or 25A, as appropriate, of 40 CFR Part 60, Appendix A;

The OC test method selected shall be based on a consideration of the diversity of organic species present and their total concentrations, and on a consideration of the potential presence of interfering gases.

The thermal oxidizer CO control (destruction) efficiency shall be determined in accordance with Methods 1 through 4 and 10, of 40 CFR Part 60, Appendix A and shall measure the percent reduction in mass emissions of CO between the inlet and outlet of the thermal oxidizer.

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

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Cleveland DAQ. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will

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be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Cleveland DAQ's refusal to accept the results of the emission test(s).

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

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Cleveland DAQ 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 Cleveland DAQ.

VI. Miscellaneous Requirements

None.

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.

Table with 3 columns: Operations, Property, and/or Equipment; Applicable Rules/Requirements; Applicable Emissions Limitations/Control Measures. Row 1: None, None, None.

2. Additional Terms and Conditions

2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.