



State of Ohio Environmental Protection Agency

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

**CERTIFIED MAIL**

Street Address:

50 West Town Street, Suite 700

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

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 03-17341**

**Fac ID: 0302020012**

**DATE: 1/31/2008**

Lima Refining Company  
Tom Jettinghoff  
1150 S. Metcalf Street  
Lima, OH 45804

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

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

Sincerely,

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

CC: USEPA

NWDO



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**Permit To Install  
Terms and Conditions**

**Issue Date: 1/31/2008  
Effective Date: 1/31/2008**

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**FINAL PERMIT TO INSTALL 03-17341**

Application Number: 03-17341  
Facility ID: 0302020012  
Permit Fee: **\$700**  
Name of Facility: Lima Refining Company  
Person to Contact: Tom Jettinghoff  
Address: 1150 S. Metcalf Street  
Lima, OH 45804

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**1150 South Metcalf Street  
Lima, Ohio**

Description of proposed emissions unit(s):  
**Modification of 03-1138 - B022, B024.**

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

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Chris Korleski  
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 the appropriate Ohio EPA District Office or local air agency. The written

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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.

#### 12. Air Pollution Nuisance

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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. The appropriate Ohio EPA District Office or local air agency must be notified in writing

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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>
PE	16.17
SO <sub>2</sub>	27.68
NO <sub>x</sub>	172.79
CO	94.48

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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**

- 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.

**Operations, Property, and/or Equipment - (B022) - refinery fuel gas or natural gas fired hot oil belt heater - aromatics, 204 million Btu/hr maximum (PR 175102) - administrative modification of PTI No. 03-1138 issued on March 8, 1982 (and subsequent modification issued on April 14, 1982) to increase allowable emissions of carbon monoxide due to AP-42 emission factor revision, and specify a monthly averaging period for allowable sulfur dioxide emissions**

<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
40 CFR Part 60, Subpart J	See section A.1.2.a
OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3)
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule
OAC rule 3745-31-05(A)(3)	0.014 pound of particulate emissions (PE) per million Btu of actual heat input  0.024 pound of sulfur dioxide (SO <sub>2</sub> ) per million Btu of actual heat input, as a monthly average - see section A.1.2.b  0.150 pound of nitrogen oxides (NO <sub>x</sub> ) per million Btu of actual heat input  0.082 pound of carbon monoxide (CO) per million Btu of actual heat input - see section A.1.2.c  See section A.1.2.d
40 CFR 63, Subpart DDDDD	See section A.1.2.e
40 CFR 63, Subpart A	See section A.1.2.f

Emissions Unit ID: B022

**2. Additional Terms and Conditions**

- 2.a** The permittee shall not burn any refinery fuel gas in this emissions unit that contains hydrogen sulfide (H<sub>2</sub>S) in excess of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume). This H<sub>2</sub>S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).
- 2.b** The emission limitation of 0.024 pound of SO<sub>2</sub> per million Btu of actual heat input is based on a monthly average (long-term emission limitation). The permittee shall use the H<sub>2</sub>S continuous emission monitoring data to calculate the SO<sub>2</sub> emissions on a monthly basis. The short-term emissions limitation is the H<sub>2</sub>S limitation for refinery fuel gas and/or natural gas in A.I.2.a above.
- 2.c** The CO emission limitation is based on a revised emission factor published in AP-42, Fifth Edition, Section 1.4 (July 1998).
- 2.d** The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR 60.104(a)(1).
- 2.e** This emissions unit is subject to requirements of 40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Refer to Part II - Specific Facility Terms and Conditions, section A.17, in the Title V permit minor modification with effective date of November 28, 2005 for applicable requirements.
- 2.f** Refer to Part II - Specific Facility Terms and Conditions, section A.10, in the Title V permit minor modification with effective date of November 28, 2005 for the requirements of 40 CFR Part 63, Subpart A; - National Emission Standards for Hazardous Air Pollutants - General Provisions.

**II. Operational Restrictions**

1. The permittee shall burn only refinery fuel gas or natural gas in this emissions unit.

**III. Monitoring and/or Recordkeeping Requirements**

1. In order to demonstrate compliance with the emission limitation of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume) of H<sub>2</sub>S in the refinery fuel gas (and if applicable, combined fuel firing as noted in A.I.2.a above), the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit. The monitoring shall be conducted

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in accordance with 40 CFR 60.105(a)(4), as follows:

- a. The span value for this instrument is 425 mg/dscm of H<sub>2</sub>S.
  - b. Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the fuel gas being burned.
  - c. The performance evaluations for this H<sub>2</sub>S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR 60, Appendix B. The permittee shall conduct an annual relative accuracy test audit (RATA) for the H<sub>2</sub>S continuous emission monitoring equipment. Method 11 of 40 CFR Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.
2. A statement of certification of the existing H<sub>2</sub>S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the appropriate Ohio EPA District Office or local air agency upon request.
  3. The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen sulfide from 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 60.13.  
  
The permittee shall maintain records of all data obtained by the H<sub>2</sub>S CEMS including, but not limited to, parts per million of H<sub>2</sub>S on an instantaneous (1-minute) basis, emissions of H<sub>2</sub>S in units of the applicable standard (grain/dscf and parts per million by volume) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.
  4. The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H<sub>2</sub>S. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. A logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

Emissions Unit ID: B022

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

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas or natural gas is burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

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2. The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any H<sub>2</sub>S CEMS downtime 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 source and CEMS malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.
3. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) on a quarterly basis, in writing, of all rolling, 3-hour periods during which the average concentration of H<sub>2</sub>S as measured by the H<sub>2</sub>S CEMS under 40 CFR 60.105(a)(4) exceeds 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages. The notification shall include a copy of the record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) by January 30, April 30, July 30 and October 30 of each year and shall address the data obtained during previous calendar quarters.
4. If there are no concentrations of H<sub>2</sub>S in the refinery fuel gas (or combined fuel stream, if applicable) greater than 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume) during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times. These quarterly reports shall be submitted by January 30, April 30, July 30 and October 30 of each year and shall address the data obtained during previous calendar quarters.

## **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

230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume) of H<sub>2</sub>S in the refinery fuel gas, or combined fuel stream if applicable

Applicable Compliance Method

Emissions Unit ID: B022

Compliance shall be based upon the monitoring and record keeping requirements specified in sections A.III.1 and A.III.3 for this emissions unit. If required, the permittee shall determine compliance with the H<sub>2</sub>S emission limitation by using Method 11 of 40 CFR Part 60, Appendix A, or other approved USEPA methods.

b. Emission Limitation

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

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Applicable Compliance Method

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the requirements specified in OAC rule 3745-17-03(B)(1).

c. Emission Limitation

0.014 pound of PE per million Btu of actual heat input

Applicable Compliance Method

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet per hour, by the appropriate particulate emission factor, in pound(s) per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Method 5 of 40 CFR Part 60, Appendix A.

d. Emission Limitation

0.024 pound of SO<sub>2</sub> per million Btu of actual heat input, as a monthly average

Applicable Compliance Method

Compliance shall be based upon the monitoring and record keeping requirements specified in sections A.III.1 and A.III.3 for this emissions unit, with subsequent monthly emissions calculations for SO<sub>2</sub>, based on use of CEM data for H<sub>2</sub>S. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Method 6 of 40 CFR Part 60, Appendix A.

e. Emission Limitation

0.150 pound of NO<sub>x</sub> per million Btu of actual heat input

Applicable Compliance Method

Emissions Unit ID: B022

**Issued: 1/31/2008**

Ongoing compliance with this emission limitation shall be demonstrated through emission testing in accordance with Ohio EPA, Division of Air Pollution Control, Engineering Guide #16.

**Issued: 1/31/2008**

f. Emission Limitation

0.082 pound of CO per million Btu of actual heat input

Applicable Compliance Method

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet per hour, by the appropriate CO emission factor, in pound(s) per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Method 10 of 40 CFR Part 60, Appendix A.

**VI. Miscellaneous Requirements**

1. This PTI supercedes terms and conditions for this emissions unit in PTI No. 03-1138 issued on March 8, 1982 and the subsequent modification that was issued on April 14, 1982.

**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.

**Operations, Property, and/or Equipment - (B022) - refinery fuel gas or natural gas fired hot oil belt heater - aromatics, 204 million Btu/hr maximum (PR 175102) - administrative modification of PTI No. 03-1138 issued on March 8, 1982 (and subsequent modification issued on April 14, 1982) to increase allowable emissions of carbon monoxide due to AP-42 emission factor revision, and specify a monthly averaging period for allowable sulfur dioxide emissions**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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

**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.

**Operations, Property, and/or Equipment - (B024) - refinery fuel gas or natural gas fired isomerization heater, 59 million Btu/hr maximum (PR 175110) - administrative modification of PTI No. 03-1138 issued on March 8, 1982 (and subsequent modification issued on April 14, 1982) to increase allowable emissions of carbon monoxide due to AP-42 emission factor revision, and specify a monthly averaging period for allowable sulfur dioxide emissions**

<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
40 CFR Part 60, Subpart J	See section A.1.2.a
OAC rule 3745-17-10(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3)
OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule
OAC rule 3745-31-05(A)(3)	0.014 pound of particulate emissions (PE) per million Btu of actual heat input  0.024 pound of sulfur dioxide (SO <sub>2</sub> ) per million Btu of actual heat input, as a monthly average - see section A.1.2.b  0.150 pound of nitrogen oxides (NO <sub>x</sub> ) per million Btu of actual heat input  0.082 pound of carbon monoxide (CO) per million Btu of actual heat input - see section A.1.2.c  See section A.1.2.d
40 CFR 63, Subpart DDDDD	See section A.1.2.e
40 CFR 63, Subpart A	See section A.1.2.f

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## 2. Additional Terms and Conditions

- 2.a The permittee shall not burn any refinery fuel gas in this emissions unit that contains hydrogen sulfide (H<sub>2</sub>S) in excess of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume). This H<sub>2</sub>S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d).
- 2.b The emission limitation of 0.024 pound of SO<sub>2</sub> per million Btu of actual heat input is based on a monthly average (long-term emission limitation). The permittee shall use the H<sub>2</sub>S continuous emission monitoring data to calculate the SO<sub>2</sub> emissions on a monthly basis. The short-term emissions limitation is the H<sub>2</sub>S limitation for refinery fuel gas and/or natural gas in A.I.2.a above.
- 2.c The CO emission limitation is based on a revised emission factor published in AP-42, Fifth Edition, Section 1.4 (July 1998).
- 2.d The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR 60.104(a)(1).
- 2.e This emissions unit is subject to requirements of 40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Refer to Part II - Specific Facility Terms and Conditions, section A.17, in the Title V permit minor modification with effective date of November 28, 2005 for applicable requirements.
- 2.f Refer to Part II - Specific Facility Terms and Conditions, section A.10, in the Title V permit minor modification with effective date of November 28, 2005 for the requirements of 40 CFR Part 63, Subpart A; - National Emission Standards for Hazardous Air Pollutants - General Provisions.

## II. Operational Restrictions

- 1. The permittee shall burn only refinery fuel gas or natural gas in this emissions unit.

## III. Monitoring and/or Recordkeeping Requirements

- 1. In order to demonstrate compliance with the emission limitation of 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume) of H<sub>2</sub>S in

Emissions Unit ID: B024

the refinery fuel gas (and if applicable, combined fuel firing as noted in A.1.2.a above), the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in the refinery fuel gas or combined fuel stream before being burned in this emissions unit. The monitoring shall be conducted in accordance with 40 CFR 60.105(a)(4), as follows:

- a. The span value for this instrument is 425 mg/dscm of H<sub>2</sub>S.
  - b. Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the fuel gas being burned.
  - c. The performance evaluations for this H<sub>2</sub>S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR 60, Appendix B. The permittee shall conduct an annual relative accuracy test audit (RATA) for the H<sub>2</sub>S continuous emission monitoring equipment. Method 11 of 40 CFR Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.
2. A statement of certification of the existing H<sub>2</sub>S continuous emission monitoring system (CEMS) shall be maintained on site and shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certification tests and a statement by the Agency that the system is considered certified in accordance with the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. Proof of certification shall be made available to representatives of the appropriate Ohio EPA District Office or local air agency upon request.
  3. The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen sulfide from 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 60.13.  
  
The permittee shall maintain records of all data obtained by the H<sub>2</sub>S CEMS including, but not limited to, parts per million of H<sub>2</sub>S on an instantaneous (1-minute) basis, emissions of H<sub>2</sub>S in units of the applicable standard (grain/dscf and parts per million by volume) as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.
  4. The permittee shall maintain a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of H<sub>2</sub>S. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. A logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.
  5. For each day during which the permittee burns a fuel other than refinery fuel gas or

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natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

**IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas or natural gas is burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

Emissions Unit ID: B024

2. The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency documenting any H<sub>2</sub>S CEMS downtime 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 source and CEMS malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included the quarterly report.
3. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) on a quarterly basis, in writing, of all rolling, 3-hour periods during which the average concentration of H<sub>2</sub>S as measured by the H<sub>2</sub>S CEMS under 40 CFR 60.105(a)(4) exceeds 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume). The rolling, 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages. The notification shall include a copy of the record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) by January 30, April 30, July 30 and October 30 of each year and shall address the data obtained during previous calendar quarters.
4. If there are no concentrations of H<sub>2</sub>S in the refinery fuel gas (or combined fuel stream, if applicable) greater than 230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume) during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times. These quarterly reports shall be submitted by January 30, April 30, July 30 and October 30 of each year and shall address the data obtained during previous calendar quarters.

## 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

230 mg/dscm (0.10 grain/dscf)(the equivalent concentration is 162 parts per million by volume) of H<sub>2</sub>S in the refinery fuel gas, or combined fuel stream if applicable

- Applicable Compliance Method

Compliance shall be based upon the monitoring and record keeping requirements specified in sections A.III.1 and A.III.3 for this emissions unit. If required, the permittee shall determine compliance with the H<sub>2</sub>S emission limitation by using Method 11 of 40 CFR Part 60, Appendix A, or other approved USEPA methods.

**Issued: 1/31/2008**

b. Emission Limitation

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Issued: 1/31/2008

Applicable Compliance Method

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the requirements specified in OAC rule 3745-17-03(B)(1).

c. Emission Limitation

0.014 pound of PE per million Btu of actual heat input

Applicable Compliance Method

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet per hour, by the appropriate particulate emission factor, in pound(s) per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Method 5 of 40 CFR Part 60, Appendix A.

d. Emission Limitation

0.024 pound of SO<sub>2</sub> per million Btu of actual heat input, as a monthly average

Applicable Compliance Method

Compliance shall be based upon the monitoring and record keeping requirements specified in sections A.III.1 and A.III.3 for this emissions unit, with subsequent monthly emissions calculations for SO<sub>2</sub>, based on use of CEM data for H<sub>2</sub>S. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Method 6 of 40 CFR Part 60, Appendix A.

e. Emission Limitation

0.150 pound of NO<sub>x</sub> per million Btu of actual heat input

Applicable Compliance Method

**Lima Refining Company**  
DTI Application: 02-17244

**Facility ID: 0302020012**

Emissions Unit ID: B024

Ongoing compliance with this emission limitation shall be demonstrated through emission testing in accordance with Ohio EPA, Division of Air Pollution Control, Engineering Guide #16.

**Issued: 1/31/2008**

f. Emission Limitation

0.082 pound of CO per million Btu of actual heat input

Applicable Compliance Method

The permittee shall demonstrate compliance with this limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet per hour, by the appropriate CO emission factor, in pound(s) per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), and then dividing by the maximum heat input to the process heater. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Method 10 of 40 CFR Part 60, Appendix A.

**VI. Miscellaneous Requirements**

1. This PTI supercedes terms and conditions for this emissions unit in PTI No. 03-1138 issued on March 8, 1982 and the subsequent modification that was issued on April 14, 1982.

Issued: 1/31/2008

**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.

**Operations, Property, and/or Equipment - (B024) - refinery fuel gas or natural gas fired isomerization heater, 59 million Btu/hr maximum (PR 175110) - administrative modification of PTI No. 03-1138 issued on March 8, 1982 (and subsequent modification issued on April 14, 1982) to increase allowable emissions of carbon monoxide due to AP-42 emission factor revision, and specify a monthly averaging period for allowable sulfur dioxide emissions**

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
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**

**Issued: 1/31/2008**

None

Emissions Unit ID: B024

Emissions Unit ID: B024

SIC CODE 2911 SCC CODE 3-06-001-06 EMISSIONS UNIT ID B022

EMISSIONS UNIT DESCRIPTION refinery fuel gas or natural gas fired hot oil belt heater - aromatics, 204 million Btu/hr maximum

DATE INSTALLED June 1984

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	Attainment	0.014 lb./mmBtu	12.53	0.014 lb./mmBtu	12.53
PM <sub>10</sub>					
Sulfur Dioxide	Attainment	0.024 lb./mmBtu	21.46	0.024 lb./mmBtu	21.46
Organic Compounds					
Nitrogen Oxides	Attainment	0.150 lb./mmBtu	134.03	0.150 lb./mmBtu	134.03
Carbon Monoxide	Attainment	0.082 lb./mmBtu	73.28	0.082 lb./mmBtu	73.28
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? **Sub. J** NESHAP? **Sub. A, DDDDD** PSD? none OFFSET POLICY? none

**WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?**

compliance with the terms and conditions of this permit

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ \_\_\_\_\_

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*? \_\_\_\_\_ YES \_\_\_\_\_ NO

IDENTIFY THE AIR CONTAMINANTS: \_\_\_\_\_

**Lima Refining Company**  
**PTI Application: 03-17341**  
**Issued: 1/31/2008**

**Facility ID: 0302020012**

Emissions Unit ID: B024

SIC CODE 2911 SCC CODE 3-06-001-06 EMISSIONS UNIT ID B024  
 EMISSIONS UNIT DESCRIPTION refinery fuel gas or natural gas fired isomerization heater, 59 million Btu/hr maximum  
 DATE INSTALLED June 1984

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	Attainment	0.014 lb.mmBtu	3.64	0.014 lb.mmBtu	3.64
PM <sub>10</sub>					
Sulfur Dioxide	Attainment	0.024 lb/mmBtu	6.22	0.024 lb/mmBtu	6.22
Organic Compounds					
Nitrogen Oxides	Attainment	0.150 lb/mmBtu	38.76	0.150 lb/mmBtu	38.76
Carbon Monoxide	Attainment	0.082 lb/mmBtu	21.20	0.082 lb/mmBtu	21.20
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? **Sub. J** NESHAP? **Sub. A, DDDDD** PSD? none OFFSET POLICY? none

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

compliance with the terms and conditions of this permit

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ \_\_\_\_\_

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*? \_\_\_\_\_ YES \_\_\_\_\_ NO

IDENTIFY THE AIR CONTAMINANTS: \_\_\_\_\_