



Environmental Protection Agency

John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

5/2/2011

Certified Mail

Paul Logsdon  
Lima Refining Company  
1150 South Metcalf Street  
Lima, OH 45804

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
Yes	MACT/GACT
Yes	NSPS
Yes	NESHAPS
Yes	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL  
Facility ID: 0302020012  
Permit Number: P0107904  
Permit Type: Administrative Modification  
County: Allen

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, The Lima News. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Issued Air Pollution Control Permits" link. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall  
Permit Review/Development Section  
Ohio EPA, DAPC  
50 West Town Street, Suite 700  
P.O. Box 1049  
Columbus, Ohio 43216-1049

and Ohio EPA DAPC, Northwest District Office  
347 North Dunbridge Road  
Bowling Green, OH 43402

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461.

Sincerely,

Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 - *Via E-Mail Notification*  
Ohio EPA-NWDO; Indiana





## Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

X Netting Determination

2. Source Description:

This modification involves adjusting the emissions limits for emissions unit B028, refinery fuel gas or natural gas fired process heater for the catalytic gasoline hydrotreating unit, based on a study required by the federal consent decree addendum, civil action No. SA07CA0683RF, dated 11/20/07; to determine the correct maximum heat input of the process heater. This process heater was originally permitted at 18.2 million Btu per hour. The correct maximum heat input capacity is 24.6 million Btu per hour. The modification will not change the current facility crude oil processing capacity, nor the amount of overall gasoline production capacity.

3. Facility Emissions and Attainment Status:

Lima Refining Company is a major stationary source for SO2, NOx, CO, PE/PM10 and VOC. Allen County is in attainment or attainment/unclassified status for all of the above pollutants, including compliance with the current ozone NAAQS.

4. Source Emissions:

The following tables show the emissions of each pollutant for the process heater for the originally permitted maximum heat input of 18.2 million Btu per hour and the revised value of 24.6 million Btu per hour:

**Process Heater with original 18.2 million Btu per hour:**

	SO2	NOx	CO	PE/PM10	VOC
Maximum Emissions	2.10	3.44	6.57	0.61	0.44
Total Tier II Project Emissions (New, Increased, Modified Units)	102.81	357.69	147.18	12.55	44.76
Total Tier II Project Emissions (Future Potential to Emit-Baseline)	-853.72	-90.91	-1.94	-11.35	37.91
Netting Emissions Reductions*	None	None	None	None	-173.99
Project Netting	-853.72	-90.91	-1.94	-11.35	-136.08



PSD/NSR Significance Level (tons/yr)	40	40	100	15	40
Exceed Significance Level?	No	No	No	No	No

\* shutdown of P029, and various storage tanks with change in service (2000-2002)

**Process Heater with revised 24.6 million Btu per hour:**

	SO2	NOx	CO	PE/PM10	VOC
Maximum Emissions	3.31	4.63	10.34	0.94	0.68
Total Tier II Project Emissions (New, Increased, Modified Units)	104.02	358.88	150.95	12.88	45.00
Total Tier II Project Emissions (Future Potential to Emit-Baseline)	-852.51	-89.72	1.83	-11.02	38.15
Netting Emissions Reductions*	None	None	None	None	-173.99
Project Netting	-852.51	-89.72	1.83	-11.02	-135.84
PSD/NSR Significance Level (tons/yr)	40	40	100	15	40
Exceed Significance Level?	No	No	No	No	No

\* shutdown of P029, and various storage tanks with change in service (2000-2002)

5. Conclusion:

Emissions of each pollutant from the adjustment in maximum heat input capacity will result in net emission changes below PSD/NSR significance levels. Thus, the permittee will "net out" of PSD review requirements for all pollutants listed in the above table.

6. Please provide additional notes or comments as necessary:

None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	0.94
NOx	4.63
CO	10.34
VOC	0.68
SO2	3.31



PUBLIC NOTICE  
Issuance of Draft Air Pollution Permit-To-Install  
Lima Refining Company

Issue Date: 5/2/2011  
Permit Number: P0107904  
Permit Type: Administrative Modification  
Permit Description: Administrative modification of PTI #03-13794 for (1) B028: revise heat input capacity based on required study in federal consent decree, revise emissions limitations for new heat input capacity and replace Method 11 with Method 15; (2) P038: change sampling frequency for total dissolved solids from weekly to monthly; (3) P041: Add NSPS Sub. J applicability for fuel gas combustion (tail gas incinerator), revise span on oxygen CEM from 10 to 25%, and revise testing section to reflect testing already completed from previous PTI.  
Facility ID: 0302020012  
Facility Location: Lima Refining Company  
1150 South Metcalf Street,  
Lima, OH 45804  
Facility Description: Petroleum Refineries

Scott J. Nally, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio, has issued a draft action of an air pollution control permit-to-install (PTI) for an air contaminant source at the location identified above on the date indicated. Installation of the air contaminant source may proceed upon final issuance of the PTI. Comments concerning this draft action, or a request for a public meeting, must be sent in writing no later than thirty (30) days from the date this notice is published. All comments, questions, requests for permit applications or other pertinent documentation, and correspondence concerning this action must be directed to Andrea Moore at Ohio EPA DAPC, Northwest District Office, 347 North Dunbridge Road, Bowling Green, OH 43402 or (419)352-8461. The permit can be downloaded from the Web page: [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc)





**DRAFT**

**Division of Air Pollution Control**  
**Permit-to-Install**  
for  
Lima Refining Company

Facility ID: 0302020012  
Permit Number: P0107904  
Permit Type: Administrative Modification  
Issued: 5/2/2011  
Effective: To be entered upon final issuance





Division of Air Pollution Control
Permit-to-Install
for
Lima Refining Company

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## Authorization

Facility ID: 0302020012  
Facility Description: Petroleum Refinery and Storage  
Application Number(s): A0041407, A0041736  
Permit Number: P0107904  
Permit Description: Administrative modification of PTI #03-13794 for (1) B028: revise heat input capacity based on required study in federal consent decree, revise emissions limitations for new heat input capacity and replace Method 11 with Method 15; (2) P038: change sampling frequency for total dissolved solids from weekly to monthly; (3) P041: Add NSPS Sub. J applicability for fuel gas combustion (tail gas incinerator), revise span on oxygen CEM from 10 to 25%, and revise testing section to reflect testing already completed from previous PTI.  
Permit Type: Administrative Modification  
Permit Fee: \$925.00 *DO NOT send payment at this time, subject to change before final issuance*  
Issue Date: 5/2/2011  
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

Lima Refining Company  
1150 South Metcalf Street  
Lima, OH 45804

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

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office  
347 North Dunbridge Road  
Bowling Green, OH 43402  
(419)352-8461

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the 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

Scott J. Nally  
Director



## Authorization (continued)

Permit Number: P0107904  
Permit Description: Administrative modification of PTI #03-13794 for (1) B028: revise heat input capacity based on required study in federal consent decree, revise emissions limitations for new heat input capacity and replace Method 11 with Method 15; (2) P038: change sampling frequency for total dissolved solids from weekly to monthly; (3) P041: Add NSPS Sub. J applicability for fuel gas combustion (tail gas incinerator), revise span on oxygen CEM from 10 to 25%, and revise testing section to reflect testing already completed from previous PTI.

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

<b>Emissions Unit ID:</b>	<b>B028</b>
Company Equipment ID:	Process Heater
Superseded Permit Number:	03-13794
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P038</b>
Company Equipment ID:	FCC Cooling Tower
Superseded Permit Number:	03-13794
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P041</b>
Company Equipment ID:	Butane-Butylene Treater
Superseded Permit Number:	03-13794
General Permit Category and Type:	Not Applicable



## **A. Standard Terms and Conditions**



## **1. Federally Enforceable Standard Terms and Conditions**

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
  - (1) Standard Term and Condition A.2.a), Severability Clause
  - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
  - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
  - (4) Standard Term and Condition A.9., Reporting Requirements
  - (5) Standard Term and Condition A.10., Applicability
  - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
  - (7) Standard Term and Condition A.14., Public Disclosure
  - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
  - (9) Standard Term and Condition A.16., Fees
  - (10) Standard Term and Condition A.17., Permit Transfers

## **2. Severability Clause**

- a) 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.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

## **3. 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.

#### **4. Monitoring and Related Record Keeping 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:
  - (1) The date, place (as defined in the permit), and time of sampling or measurements.
  - (2) The date(s) analyses were performed.
  - (3) The company or entity that performed the analyses.
  - (4) The analytical techniques or methods used.
  - (5) The results of such analyses.
  - (6) 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:
  - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.
  - (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, and (ii) 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 Ohio EPA DAPC, Northwest District Office. 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 A.15. below if no deviations occurred during the quarter.

- (3) 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 Ohio EPA DAPC, Northwest District Office 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.
- (4) This permit is for an emissions unit located at a Title V facility. 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.

## 5. 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 Ohio EPA DAPC, Northwest District Office 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).

## 6. Compliance Requirements

- a) 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.
- b) 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.
- c) 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:



- (1) 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.
  - (2) 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.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) 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.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northwest District Office 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:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) 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.

## **7. Best Available Technology**

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

## **8. 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.

## **9. 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 Ohio EPA DAPC, Northwest District Office.
- 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 Ohio EPA DAPC, Northwest District Office. 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.)

#### 10. 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).

#### 11. Construction of New Sources(s) and Authorization to Install

- a) 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.
- b) If applicable, authorization to install any new 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 has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. 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.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All

records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

## 12. Permit-To-Operate Application

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).

## 13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

## 14. 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.

## 15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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.



**16. 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.

**17. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

**18. 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.

**19. 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.

## **B. Facility-Wide Terms and Conditions**

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

- a) None.

2. The catalytic gasoline hydrotreater (CGHT) and butane-butylene treater (B-B Treater) are used to accommodate production of federally mandated Tier II fuels. The CGHT point source emissions are from the process heater, emissions unit B028. The B-B Treater point source emissions are from the sulfur recovery unit incinerator, emissions unit P040. The remainder of the emissions from the CGHT and the B-B Treater are fugitive VOC.

The CGHT, B-B Treater and sulfur recovery unit (SRU) are subject to the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of OAC rule 3745-21-09(T) - Leaks from petroleum refinery equipment, OAC rule 3745-21-09(DD) - Leaks from process units that produce organic chemicals, 40 CFR, Part 60, Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry), 40 CFR, Part 60, Subpart GGG (Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries, 40 CFR, Part 63, Subpart CC (Petroleum Refinery MACT Standards), and 40 CFR, Part 61, Subpart V (National Emission Standard for Equipment Leaks - Fugitive Emission Sources).

The permittee has submitted an alternative leak detection and repair (LDAR) monitoring plan pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR, Part 63, Subpart CC.

3. This facility is subject to 40 CFR, Part 63, Subpart UUU, National Emission Standards for Hazardous Air Pollutants: Petroleum Refineries MACT II. The permittee shall comply with all applicable requirements of 40 CFR, Part 63, Subpart UUU. The permittee shall also comply with all applicable requirements of 40 CFR Part 63, Subpart A (General Provisions) and 40 CFR, Part 63, Subpart UUU. Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR, Part 63, Subpart A and Subpart UUU.

## **C. Emissions Unit Terms and Conditions**



**1. B028, Process Heater**

**Operations, Property and/or Equipment Description:**

Refinery Fuel Gas or Natural Gas Fired Process Heater for Catalytic Gasoline Hydrotreating Unit, with Low Nitrogen Oxide Burners, 24.6 million Btu/hr maximum heat input (PR 170007)

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	0.214 lb particulate emissions (PE)/hr, 0.94 ton PE/yr  3.31 tons sulfur dioxide (SO <sub>2</sub> )/yr  0.043 lb of nitrogen oxides (NO <sub>x</sub> ) per million Btu of actual heat input [See b)(2)a.]  4.63 tons NO <sub>x</sub> /yr  2.36 lbs carbon monoxide (CO)/hr, 10.34 tons CO/yr  0.155 lb volatile organic compounds (VOC)/hr, 0.68 ton VOC/yr  See b)(2)c.
b.	OAC rule 3745-17-07(A)	Visible PE from anystack shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
c.	OAC rule 3745-17-10(B)(1)	See b)(2)d.
d.	OAC rule 3745-18-06(E)	See b)(2)e.
e.	40 CFR, Part 60, Subpart J	See b)(2)b., d)(2) through d)(5), e)(3) and e)(4)
f.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
g.	40 CFR 63.52(a)(2)	See b)(2)f.

- (2) Additional Terms and Conditions
- a. Best available technology (BAT) control requirements for this emissions unit have been determined to be use of low NO<sub>x</sub> burners meeting 0.043 lb NO<sub>x</sub> per million Btu of actual heat input.
  - b. 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).
  - c. 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).
  - d. The emission limitation specified by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
  - e. This emissions unit is fuel burning equipment which combusts refinery fuel gas or natural gas. When firing natural gas, the emissions unit is exempt from OAC rule 3745-18-06 per OAC rule 3745-18-06(A). When firing refinery fuel gas, OAC rule 3745-18-06(E) does not establish an emission limitation because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-18-01(B)(14).
  - f. This emissions unit is subject to a case-by-case MACT determination pursuant to section 112(i) of the Clean Air Act (CAA) due to the June 8, 2007 D.C. Circuit Court of Appeals decision to vacate the Boiler MACT (40 CFR, Part 63, Subpart DDDDD).  
  
If notified by the Ohio EPA or U.S. EPA, the permittee shall submit an application for a revision to this PTI that meets the requirements of 40 CFR 63.52(a)(2) pertaining to case-by-case MACT determinations. The 30 day clock for submittal of a 112(i) application does not begin until such notification is made by Ohio EPA or U.S. EPA.
- c) Operational Restrictions
- (1) The permittee shall burn only refinery fuel gas or natural gas in this emissions unit.
- d) Monitoring and/or Recordkeeping Requirements
- (1) 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.

- (2) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (162ppm) of H<sub>2</sub>S in the refinery fuel gas (and if applicable, combined fuel firing as noted in b)(2)b. 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 a ppm equivalent of 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, Part 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 15 of 40 CFR, Part 60, Appendix A, or other approved U.S. EPA methods shall be used for conducting the annual RATAs.
  - (3) 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 Ohio EPA, Northwest District Office upon request.
  - (4) 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 as a rolling, 3-hour average, the results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.
  - (5) The permittee shall maintain a quality assurance/quality control plan for the refinery fuel gas H<sub>2</sub>S continuous emission monitor 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.
- e) 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 was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

- (2) The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Northwest District Office 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 control equipment 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 Ohio EPA, Northwest District Office) 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) exceeded 230 mg/dscm (162 ppm). 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 Ohio EPA, Northwest District Office) 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 were no concentrations of H<sub>2</sub>S in the refinery fuel gas (or combined fuel stream, if applicable) that exceeded the value specified in section b)(2)b. 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.
- f) Testing Requirements
- (1) Compliance with the emissions limitations in section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:
    - a. Emission Limitation:  
  
0.214 lb PE/hr, 0.94 ton PE/yr  
  
Applicable Compliance Method:  
  
The permittee shall demonstrate compliance with the hourly 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 lb(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 Methods 1 through 4, and 5 of 40 CFR, Part 60, Appendix A.  
  
The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.



b. Emission Limitation:

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

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 Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

c. Emission Limitation:

3.31 tons SO<sub>2</sub>/yr

Applicable Compliance Method:

The annual emission limitation was established in accordance with the following equation:

$$\text{Tons SO}_2/\text{yr} = (0.10 \text{ gr H}_2\text{S}/\text{scf})(\text{lb H}_2\text{S}/7,000 \text{ gr H}_2\text{S})$$

$$(64.1 \text{ lb SO}_2/34.1 \text{ lb H}_2\text{S})(28,114 \text{ cf/hr})(8,760 \text{ hrs/yr})(\text{ton}/2,000 \text{ lbs})$$

where:

(0.10 gr H<sub>2</sub>S/scf) = 40 CFR 60.104(a)(1) emission limitation

(64.1 lb SO<sub>2</sub>/34.1 lb H<sub>2</sub>S) = conversion of hydrogen sulfide to sulfur dioxide assuming all H<sub>2</sub>S is converted to SO<sub>2</sub>

(28,114 cf/hr) = maximum fuel flow rate

(8,760 hrs/yr) = maximum operating schedule

All other values are conversion factors.

Compliance with the annual emission limitation will be shown as long as the permittee maintains compliance with the H<sub>2</sub>S emission limitation in 40 CFR 60.104(a)(1).

d. Emission Limitation:

0.043 lb NO<sub>x</sub> per million Btu of actual heat input, 4.63 tons NO<sub>x</sub>/yr

Applicable Compliance Method:

The emission limitation is based on the burner manufacturer's emissions data for low NO<sub>x</sub> burners to be installed on this emissions unit. If required, the permittee shall demonstrate compliance with this emission limitation by

conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A,

The annual emission limitation was derived by multiplying the 0.043 lb of NO<sub>x</sub> per million Btu emission limitation times the maximum heat input capacity of 24.6 million Btu/hr for the process heater, then multiplying by 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the 0.043 lb of NO<sub>x</sub> per million Btu emission limitation is maintained.

e. Emission Limitation:

2.36 lbs CO/hr, 10.34 tons CO/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly 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 lb(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 the hourly emission limitation by conducting emission testing in accordance with Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

f. Emission Limitation:

0.155 lb VOC/hr, 0.68 ton VOC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly limitation by multiplying the maximum hourly refinery fuel gas or natural gas combustion rate, in million standard cubic feet per hour, by the appropriate VOC emission factor, in lb(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 the hourly emission limitation by conducting emission testing in accordance with Methods 1 through 4, and 18, 25, or 25A, as appropriate of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

g. 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 with this emission limitation shall be demonstrated in accordance with the continuous emission monitoring requirements specified in section d)(2) through d)(4).

g) Miscellaneous Requirements

(1) None.



2. P038, FCC Cooling Tower

Operations, Property and/or Equipment Description:

Northside (FCC) Cooling Tower

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	9.34 tons of particulate emissions (PE)/yr  1.24 lbs of volatile organic compounds (VOC)/hr, 5.43 tons of VOC/yr  See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-11(B)	28.2 lbs of PE/hr [See b)(2)c.]
c.	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

(2) Additional Terms and Conditions

a. Best Available Technology (BAT) control requirements for this emissions unit have been determined to be use of high efficiency drift eliminators.

b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B).

c. The total dissolved solids (TDS) present in cooling water drift are directly responsible for the formation of PE when the drift is discharged from a cooling tower. The process weight rate (PWR) used to determine the allowable particulate mass emission rate is the total tons of TDS processed per hour through the cooling tower. Based on the maximum TDS concentration for optimum cooling tower operation of 2,400 ppm and the cooling water maximum process flow rate of 29,600 gallons per minute, a PWR of 17.77 tons of TDS per hour was calculated. Using Table 1 in OAC rule 3745-17-11(B), the allowable particulate mass emission rate was determined to be 28.2 lbs/hr.



- c) Operational Restrictions
  - (1) None.
- d) Monitoring and/or Recordkeeping Requirements
  - (1) The permittee shall collect and record the following information for this emissions unit each month:
    - a. The permittee shall test and record the TDS content, in ppm, of the cooling water at least once per month. The TDS content shall be measured using test procedures that conform to regulation 40 CFR, Part 136, "Test Procedures For The Analysis of Pollutants" or an equivalent method approved by the Ohio EPA, Northwest District Office.
  - (2) Each month, the permittee shall calculate and record the PE, in lbs per hr. The PE shall be calculated as follows:  
$$[(29,600 \text{ gallons/minute}) \times (\text{ppm TDS}) \times (0.00006) \times (60 \text{ min/hr}) \times (0.0584)] / (7,000 \text{ grains/lb}) = \text{PE, in lbs/hr}$$
where:
    - 29,600 gallons/minute = the maximum water flow rate;
    - ppm TDS = the TDS level;
    - 0.00006 = the maximum drift loss factor;
    - 60 min/hr = conversion factor for minutes to hours;
    - 0.0584 = conversion factor for ppm to grains/gallon; and
    - 7,000 gr/lb = conversion factor for grains to pounds.
  - (3) Each month, the permittee shall use the information in d)(2) to calculate the cumulative PE to date, for the calendar year from January to December.
- e) Reporting Requirements
  - (1) The permittee shall submit quarterly deviation reports that identify all exceedances of the hourly and annual allowable particulate emission limitation. The quarterly deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.
- f) Testing Requirements
  - (1) Compliance with the emission limitations in section b)(1) of these terms and conditions shall be determined in accordance with the following methods:

## a. Emission Limitation:

28.2 lbs of PE/hr

Applicable Compliance Method:

Compliance shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(1) and d)(2) of these terms and conditions. If required, the permittee shall conduct drift measurement testing to determine the drift factor for this cooling tower utilizing the "Isokinetic Drift Measurement Test Code for Water Cooling Towers", ATC-140(94), June, 1994 (or the most recent edition) from the Cooling Technology Institute.

## b. Emission Limitation:

9.34 tons of PE/yr

Applicable Compliance Method:

The annual emission limitation was established as follows:

$$[(29,600 \text{ gallons/minute}) \times (2,400 \text{ ppm TDS}) \times (0.00006) \times (60 \text{ min/hr}) \times (8,760 \text{ hours/year}) \times (0.0584)] / [(7,000 \text{ grains/lb}) \times (2,000 \text{ lbs/ton})] = \text{PE, in tons/yr}$$

where:

29,600 gallons/minute = the maximum water flow rate;

ppm TDS = the TDS level;

0.00006 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon; and

7,000 gr/lb = conversion factor for grains to pounds.

Therefore, provided compliance is shown with the TDS limitation, compliance with the annual limitation will be assumed.

## c. Emission Limitation:

1.24 lbs of VOC/hr, 5.43 tons of VOC/yr

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly limitation by multiplying the appropriate VOC emission factor of 0.7 pounds per million gallons of flow, from AP-42 Table 5.1-2 (dated 1/95), by the maximum flow of 1,776,000 gallons per hour.



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The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

d. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

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

g) Miscellaneous Requirements

(1) None.



3. P041, Butane-Butylene Treater

Operations, Property and/or Equipment Description:

Butane-Butylene (B-B) Treater

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<p>See b)(2)a.</p> <p>Combustion emissions from the tail gas incinerator shall not exceed the following:</p> <p>0.14 lb of particulate emissions (PE)/hr, 0.61 ton of PE/yr [See b)(2)b.];</p> <p>1.84 lbs of nitrogen oxides (NOx)/hr, 8.06 tons of NOx/yr;</p> <p>1.88 lbs of carbon monoxide (CO)/hr, 8.23 tons of CO/yr; and</p> <p>0.10 lb of volatile organic compounds (VOC)/hr, 0.44 ton of VOC/yr.</p> <p>Visible PE shall not exceed 20% opacity, as a six-minute average.</p> <p>Process emissions from the tail gas incinerator shall not exceed the following:</p> <p>19.18 lbs of sulfur dioxide (SO2)/hr, as a 12-hr average, and 84.02 tons of SO2/yr; and</p> <p>250 parts per million by volume (dry basis) of SO2 at 0% excess air.</p>
b.	OAC rule 3745-18-06(E)	See b)(2)c.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)(1)	None [See b)(2)d.]
d.	OAC rule 3745-17-07(A)	None [See b)(2)e.]
e.	40 CFR, Part 63, Subpart CC [40 CFR 63.640 – 63.656]  [In accordance with 40 CFR 63.640, this emissions unit is an affected source since it contains Group 1 process vents that are routed to either the FCC/Coker flare (emissions unit P006) or the LIU flare (emissions unit P007)]	See b)(2)f., d)(3), e)(4) and f)(2)
f.	OAC rule 3745-21-09(T)	leaks from petroleum refinery equipment [See b)(2)h.]
g.	OAC rule 3745-21-09(DD)	leaks from petroleum refinery equipment [See b)(2)h.]
h.	40 CFR, Part 60, Subpart VV	leaks from petroleum refinery equipment [See b)(2)h.]
i.	40 CFR, Part 60, Subpart GGG	leaks from petroleum refinery equipment [See b)(2)h.]
j.	40 CFR, Part 60, Subpart J	See b)(2)i.
k..	40 CFR, Part 61, Subpart FF [40 CFR 61.340 – 61.358] [In accordance with 40 CFR 61.340, this emissions unit is an affected source since processing of wastewater containing benzene occurs.]	See b)(2)g.
l.	40 CFR, Part 61, Subpart V	leaks from petroleum refinery equipment [See b)(2)h.]
m.	40 CFR 63.1 through 63.15	Table 6 to 40 CFR, Part 63, Subpart CC – Applicability of General Provisions to Subpart CC shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

- a. The spent air stream from the B-B Treater shall be routed to the oxidation chamber of the tail gas incinerator at the sulfur recovery unit (SRU), emissions unit P040. The new tail gas incinerator is a common egress point for emissions from the SRU and the B-B Treater spent air stream; therefore, all the emission limitations are combined for these emission units (P040 and P041).

- b. It is assumed that all particulate emissions are PM10.
- c. The emission limitation specified by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- d. The uncontrolled mass rate of PE\* from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure I 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 rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(14).

\* The burning of gaseous fuels is the only source of PE from this emissions unit.

- e. This emissions unit is exempt from the visible PE 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.
- f. MACT requirements in 40 CFR, Part 63, Subpart CC are applicable for each Group 1 process vent that is part of this emissions unit, and is routed to either emissions unit P006 and/or P007, the FCC/Coker flare or LIU flare, respectively.

The permittee shall comply with the applicable control requirements, emission limit and compliance demonstration methods under 40 CFR, Part 63, Subpart CC, including the following sections:

63.642(g)	Facility-wide Emission Limit for Organic Hazardous Air Pollutants
63.642(i) and 63.642(k)	Compliance Demonstration Method for 63.642(g)
63.643(a)(1)	Required Use of Flare to Reduce Organic Hazardous Air Pollutants

- g. The permittee shall include the B-B Treater in the current site benzene waste operations program.
- h. This emissions unit is subject to the appropriate provisions (including operational restrictions, monitoring and record keeping, reporting, and testing) of OAC rule 3745-21-09(T) – Leaks from petroleum refinery equipment, OAC rule 3745-21-09(DD) – Leaks from process units that produce organic chemicals, 40 CFR, Part 60, Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry), 40 CFR, Part 60, Subpart GGG (Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries, 40 CFR, Part 63, Subpart CC (Petroleum Refinery MACT Standards), and 40 CFR, Part 61, Subpart V (National Emission Standard for Equipment Leaks – Fugitive Emission Sources).

The requirements of these rules are equivalent to or less stringent than the alternative leak detection and repair (LDAR) monitoring plan submitted by the permittee, pursuant to OAC rule 3745-21-09(T)(4) and 40 CFR, Part 63, Subpart CC. Terms and conditions for the alternative LDAR plan are listed in section B.2 of the Facility-Wide Terms and Conditions of the Title V renewal permit.

- i. NSPS requirements in 40 CFR, Part 60, Subpart J, 60.104(a)(1) are applicable to the tail gas incinerator, part of Ohio EPA emissions unit P040, as the tail gas incinerator is considered a fuel gas combustion device as per 40 CFR, Part 60, Subpart J, 60.101(h) due to the combustion of the B-B treater spent air stream. As this stream has been previously demonstrated to be inherently low in sulfur content, this stream is exempt from the monitoring requirements presented in 40 CFR, Part 60, Subpart J, 60.105(a)(4) according to 40 CFR, Part 60, Subpart J, 60.105(a)(4)(iv)(d). Please refer to the written application submitted to Ohio EPA on 11/3/2009, company file #A14-09-46, in accordance with the application requirements presented in 40 CFR, Part 60, Subpart J, 60.105 (b).

A fuel gas stream that is determined to be low-sulfur is exempt from the monitoring requirements in 40 CFR, Part 60, Subpart J, 60.105(a)(3) and (4) until there are changes in the operating conditions or stream composition. No further action is required outside of the written application request in accordance with 40 CFR, Part 60, Subpart J, 60.105(b)(3) unless refinery operating conditions change in such a way that affects the exempt fuel gas stream (e.g. the stream composition changes).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall operate and maintain equipment to continuously monitor and record SO<sub>2</sub> from this emissions unit in units of the applicable standard. The span value of the continuous emission monitoring system (CEMS) shall be 500 ppm SO<sub>2</sub>. 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 continuous SO<sub>2</sub> monitoring system including, but not limited to, parts per million of SO<sub>2</sub> on an instantaneous (1-minute) basis, and lbs/hr of SO<sub>2</sub>; as a 12-hr average, results of daily zero/span calibration checks, and the magnitudes of manual calibration adjustments.

The permittee shall maintain a written quality assurance/quality control (QA/QC) plan for the SO<sub>2</sub> CEMS that follows the requirements of 40 CFR, Part 60 Appendix F. The QA/QC plan and logbook for the SO<sub>2</sub> CEMS must be kept on site and available for inspection during regular office hours.

- (2) The permittee shall operate and maintain equipment to continuously monitor and record the oxygen (O<sub>2</sub>) from this emissions unit in percent O<sub>2</sub>. The span value of the CEMS shall be 25 percent O<sub>2</sub>. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 or as approved by the Ohio EPA, Central Office. The permittee shall maintain records of all data obtained by the



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continuous O2 monitoring system including, but not limited to percent O2 on an instantaneous (1-minute) basis, results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

The permittee shall maintain a quality assurance/quality control plan for the continuous O2 monitoring system designed to ensure continuous valid and representative readings. The plan shall follow the requirements of 40 CFR, Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous O2 system must be kept on site and available for inspection during regular office hours.

- (3) The permittee shall comply with the monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.642(e)	Maintain Records for 5 Years
63.644(a)(2)	Required Use of a Device to Continuously Detect Presence of Pilot Flame
63.644(a)(3)	Monitoring Exemption for Group 1 Miscellaneous Process Vents Routed to a Heater
63.644(d)	Establish Monitoring Range
63.644(e)	Operate Control Device Within Monitoring Range
63.655(i)(2)	Records Retention – Test Results
63.655(i)(3)(i)	Records Retention – Hourly Monitoring Data
63.655(i)(3)(ii)	Records Retention – Monitoring Data
63.655(i)(3)(iv)	Records Retention – Daily Average Values Simplified
63.655(i)(3)(v)	Records Retention – Monitor Downtime
63.655(i)(4)	Maintain Records for 5 Years
63.655(i)(5)	Records Retention – Keep Records for Five Years

e) Reporting Requirements

- (1) Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(l) and 3704.031 and 40CFR, Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting the date, commencement and completion times, duration magnitude,

reason (if known), and corrective actions taken (if any), of all 12 hour periods of SO<sub>2</sub> values in excess of the applicable lbs/hr and ppm limitations. These reports shall also contain the total SO<sub>2</sub> emissions for the calendar quarter (in tons).

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any continuous SO<sub>2</sub> monitoring system 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 emissions unit and control equipment 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 also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report.

These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

Pursuant to OAC rule 3745-15-04 and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR, Part 60.7. The summary shall be submitted to the Ohio EPA, Northwest District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

- (2) Pursuant to 40 CFR, Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Northwest District Office documenting any continuous O<sub>2</sub> system 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 emissions unit and control equipment 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 also be included in the quarterly report.
- (3) All quarterly reports and deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.
- (4) The permittee shall comply with the reporting requirements under 40 CFR, Part 63, Subpart CC, including the following sections:



63.642(f)	Reporting Address
63.655(e)(1) through 63.655(e)(3)	Notification of Compliance Status, Periodic Reports, and Other Reports
63.655(f)(1) and 63.655(f)(1)(iv)	Notification of Compliance Status – Contents and Flare Test Results
63.655(f)(1)(ii)	Notification of Compliance Status – Identification of Miscellaneous Process Vents
63.655(f)(3)	Notification of Compliance Status – Monitored Parameter Range
63.655(g)	Semi-annual Deviation Report for Group 1 Miscellaneous Process Vents
63.655(g)(6)	Semi-annual Deviation Report for Group 1 Miscellaneous Process Vents – Excess Emissions Reporting
63.655(h)(1)	Startup, Shutdown and Malfunction Reporting

f) Testing Requirements

(1) Compliance with the emissions limitations in section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

0.14 lb of PE/hr, 0.61 ton of PE/yr combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate particulate emission factor of 7.6 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flowrate of 18,431 standard cubic foot/hr. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 5 of 40CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

b. Emission Limitation:

1.84 lbs of NO<sub>x</sub>/hr, 8.06 tons of NO<sub>x</sub>/yr combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate NO<sub>x</sub> emission factor of 100 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flowrate of 18,431 standard cubic foot/hr.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

c. Emission Limitation:

1.88 lbs of CO/hr, 8.23 tons of CO/yr combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The CO emission limitation was derived from a vendor guarantee of a maximum CO emission rate of 100 ppm. If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

d. Emission Limitation:

0.10 lb of VOC/hr, 0.44 ton of VOC/yr combustion emissions from the tail gas incinerator

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate VOC emission factor of 5.5 pounds per million standard cubic feet, from AP-42 Chapter 1.4 (7/98), by the maximum fuel flowrate of 18,431 standard cubic foot/hr. If required, the permittee shall demonstrate compliance with the hourly emission limitation by

conducting emission testing in accordance with Methods 1 through 4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission limitation times 8,760 hrs/yr and dividing by 2,000 lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

e. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, combustion emissions from the tail gas incinerator

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A.

f. Emission Limitation:

250 parts per million by volume (dry basis) of SO<sub>2</sub> at 0% excess air, process emissions from the tail gas incinerator

Applicable Compliance Method:

Ongoing compliance with the SO<sub>2</sub> emission limitations contained in this permit; 40 CFR, Part 60 and any other applicable standard(s) shall be demonstrated through the data collected as required in the monitoring and record keeping in d)(1) and d)(2), and through demonstration of compliance with the quality assurance/quality control plan which shall meet the testing and recertification requirements of 40 CFR, Part 60.

If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

g. Emission Limitation:

19.18 lbs of SO<sub>2</sub>/hr, as a 12-hr average; 84.02 tons of SO<sub>2</sub>/yr process emissions from the tail gas incinerator

Applicable Compliance Method:

Ongoing compliance with the SO<sub>2</sub> emission limitations contained in this permit; 40 CFR, Part 60 and any other applicable standard(s) shall be demonstrated through the data collected as required in the monitoring and record keeping in d)(1) and d)(2), and through demonstration of compliance with the quality assurance/quality control plan which shall meet the testing and recertification requirements of 40 CFR, Part 60.



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If required, the permittee shall demonstrate compliance with this emission limitation by conducting emission testing in accordance with the requirements specified in Methods 1 through 4, and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was derived by multiplying the hourly emission rate derived from the following equation times 8,760 hrs/yr and dividing by 2,000lbs/ton. Compliance with the annual limitation shall be shown as long as compliance with the hourly emission limitation is maintained.

- (2) The permittee shall comply with the testing requirements under 40 CFR, Part 63, Subpart CC, including the following sections:

63.645(a)	Process Vent Performance Test, Including Flare Provisions
63.645(i)	Visible Emissions Testing

g) Miscellaneous Requirements

- (1) None.