Ohio Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

10/30/2015

Certified Mail

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

Bill Rupert
BP-Husky Refining LLC
4001 Cedar Point Road
Oregon, OH 43616

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0448020007
Permit Number: P0119763
Permit Type: Administrative Modification
County: Lucas

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA)Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

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

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Toledo Department of Environmental Services at (419)936-3015 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: U.S. EPA
TDES; Michigan; Indiana; Canada

FINAL

Division of Air Pollution Control
Permit-to-Install
for
BP-Husky Refining LLC

Facility ID:	0448020007
Permit Number:	P0119763
Permit Type:	Administrative Modification
Issued:	10/30/2015
Effective:	10/30/2015

Ohio Environmental Protection Agency

Division of Air Pollution Control
Permit-to-Install
for
BP-Husky Refining LLC

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Authorization

Facility ID:	0448020007
Facility Description:	Toledo Refinery
Application Number(s):	M0003661
Permit Number:	P0119763
Permit Description:	Agency-initiated administrative modification to correct typographical errors, incorrect references to terms (including several terms reworded for clarification).
Permit Type:	Administrative Modification
Permit Fee:	$0.00
Issue Date:	10/30/2015
Effective Date:	10/30/2015

This document constitutes issuance to:

BP-Husky Refining LLC
4001 Cedar Point Road
P.O. Box 696
Oregon, OH 43697

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

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

Toledo Department of Environmental Services
348 South Erie Street
Toledo, OH 43604
(419)936-3015

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

Craig W. Butler
Director

Authorization (continued)

Permit Number: P0119763
Permit Description: Agency-initiated administrative modification to correct typographical errors, incorrect references to terms (including several terms reworded for clarification).

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

Emissions Unit ID:	**B015**
Company Equipment ID:	Crude 1 Furnace
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**B019**
Company Equipment ID:	Crude/Vac 2 Furnace
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**B029**
Company Equipment ID:	ADHT Furnace
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**B031**
Company Equipment ID:	Vac 1 Furnace
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**B032**
Company Equipment ID:	Coker 3 Furnace
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**B036**
Company Equipment ID:	Reformer 3 Heater
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P009**
Company Equipment ID:	Sulfur Recovery Unit #1
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P011**
Company Equipment ID:	Crude/Vac 1
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P025**
Company Equipment ID:	Refinery WWT System
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P028**
Company Equipment ID:	"A" Train Diesel Hydrotreater
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable

Emissions Unit ID:	**P036**
Company Equipment ID:	Coker 3
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P037**
Company Equipment ID:	Sulfur Recovery Unit #2 and #3
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P068**
Company Equipment ID:	P802
Superseded Permit Number:	P0117988
General Permit Category and Type:	Not Applicable

Group Name: Alstrom Boilers

Emissions Unit ID:	**B034**
Company Equipment ID:	East Alstom Boiler
Superseded Permit Number:	P0117988
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**B035**
Company Equipment ID:	West Alstom Boiler
Superseded Permit Number:	P0117988
General Permit Category andType:	Not Applicable

Group Name: Coker2 & Naptha Treater Heaters

Emissions Unit ID:	**B017**
Company Equipment ID:	Coker II Heater
Superseded Permit Number:	P0117988
General Permit Category andType:	Not Applicable
Emissions Unit ID:	**B022**
Company Equipment ID:	Naphtha Treater Heater
Superseded Permit Number:	P0117988
General Permit Category andType:	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) 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 Toledo Department of Environmental Services.

(2) Quarterly written reports of (i) any deviations from federally enforceable emissionlimitations, operationalrestrictions,

andcontroldeviceoperatingparameterlimitations, 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 Toledo Department of Environmental Services. 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, andreportingrequirements contained in this permit shall be submitted to the Toledo Department of Environmental Services 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 theToledo Department of Environmental Servicesin 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) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule

3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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:

(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.

c) The permittee shall submit progress reports to the Toledo Department of Environmental Services 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 Toledo Department of Environmental Services.

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 Toledo Department of Environmental Services. 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, 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)not exempt from the requirement to obtain a Permit-to-Install.

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 permittee 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 "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director 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.

Unless otherwise exempted,no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

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 operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d)must be <u>obtained before</u>operating the source in a manner that would violate the existing Title V permit requirements.

13. Construction Compliance Certification

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

a) Completion of initial installation date shall be enteredupon 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 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 following emissions units contained in this permit are subject to 40 CFR Part 60 Subpart A and J: B015, B017, B019, B022, B029, B031, B032, B034, B035, P009, and P037. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website http://ecfr.gov or by contacting the appropriate Ohio EPA district or local air agency

3. The following emissions units contained in this permit are subject to 40 CFR Part 60 Subpart A and GGGa: P011, P025 (Benzene Stripper), P036 and P068. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website http://ecfr.gov or by contacting the appropriate Ohio EPA district or local air agency.

4. The following emissions unit contained in this permit is subject to 40 CFR Part 60 Subpart A and QQQ: P025. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA district or local air agency.

5. The following emissions unit contained in this permit is subject to 40 CFR Part 60 Subpart A and NNN: P068. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website http://ecfr.gov or by contacting the appropriate Ohio EPA district or local air agency.

6. The following emissions unit contained in this permit is subject to 40 CFR Part 61 Subpart A and FF: P025. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA district or local air agency.

7. The following emissions units contained in this permit are subject to the fugitive equipment leak standards in 40 CFR Part 63 Subpart A and CC: P009, P011, P025, P028, P036, P037 and P068. The complete NSPS and MACT requirements, including the MACT General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website http://ecfr.gov or by contacting the appropriate Ohio EPA district or local air agency.

8. The following emissions units contained in this permit are subject to 40 CFR Part 63 Subpart A and DDDDD: B015, B017. B019, B022, B029, B032, B034, B035, and B036. The complete NSPS and MACT requirements, including the MACT General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website http://ecfr.gov or by contacting the appropriate Ohio EPA district or local air agency.

9. The following Sections include the monitoring, record keeping, reporting and testing requirements for the total sulfur analyzers that will be used for compliance with SO_2 limits from combustion sources after the start-up and initial shakedown of the Coker Gas Plant (P068).

a) Monitoring and/or Recordkeeping Requirements

(1) No later than the start-up of the Coker Gas Plant (P068), the permittee shall install, calibrate, operate, and maintain instrumentation to monitor and record the concentration by volume (dry basis) of total sulfur (expressed as SO_2) in the refinery fuel gas burned in each of the heaters and boilers listed in this permit (except for heaters firing fuel gas from the East Side Mix Drum). 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 total sulfur in the fuel gas being burned. Such continuous monitoring and recording equipment shall be installed operated and calibrated pursuant to the requirements specified in ASTM D7166-10, 40 CFR Part 60 Appendices A and F, the applicable performance specification test of 40 CFR Part 60 Appendix B, and the portions of 40 CFR 60.13 applicable to CEMs, except that the requirements of Section B.9.c)(1) of this permit shall apply in lieu of the requirements of 40 CFR Part 60 Appendix F 5.1.1, 5.1.3 and 5.1.4.

At least 45 days before commencing certification testing of the continuous total sulfur expressed as SO_2 monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of total sulfur expressed as SO_2 emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F except that the requirements of Section B.9.c)(1) of this permit shall apply in lieu of the requirements of 40 CFR Part 60 Appendix F 5.1.1, 5.1.3 and 5.1.4. The quality assurance/quality control plan and a logbook dedicated to the continuous total sulfur (expressed as SO_2) monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits, relative accuracy audits (RAAs), and/or relative accuracy test audits (RATAs) in units of the standard(s), in accordance with and at the frequencies specified in c)(1).

Each continuous monitoring system consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

The permittee shall maintain documentation from Ohio EPA that the continuous total sulfur monitoring system has been certified in accordance with test methods contained in 40 CFR Part 60, Appendix B, or other test methods as approved by Ohio EPA, Central Office. The letter of certification shall be made available to the Ohio EPA upon request.

The permittee shall maintain records of all data obtained by the continuous total sulfur monitoring system including, emissions of total sulfur in units of the applicable standards in the appropriate averaging period, results of daily zero/span calibration checks, and magnitudes of manual calibration adjustments.

(2) The permittee shall maintain records of all data obtained by the continuous total sulfur monitor expressed as SO_2, including, but not limited to:

a. concentration of SO_2 in parts per million for each cycle time of the analyzer;

b. results of quarterly cylinder gas audits;

c. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

d. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

e. hours of operation of the emissions unit, and continuous total sulfur monitoring system;

f. the date, time, and hours of operation of the emissions unit without the continuous total sulfur monitoring system;

g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous total sulfur monitoring system; as well as,

h. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

(3) The Permittee shall record and maintain records of:

a. the daily average total sulfur concentration (expressed as SO_2) in the fuel gas monitored

b) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

(2) The permittee shall comply with the following quarterly excess emissions report (EER) requirements for the emissions unit and its continuous SO2 monitoring system:

a. The permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO2 emissions in excess of any applicable limit specified in this permit, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous total sulfur monitor;

iii. a description of any change in the equipment that comprises the continuous monitoring system (CMS), including any change to the hardware, changes to the software that may affect CMS readings, and/or changes in the location of the CMS sample probe;

iv. the total operating time of the continuous total sulfur monitoring system;

v. results and dates of quarterly cylinder gas audits;

vi. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

vii. unless previously submitted, the results of any relative accuracy test audit showing the continuous total sulfur monitor out-of-control and the compliant results following any corrective actions;

viii. total duration of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility;

ix. total duration of CMS downtime*** for the reporting period, and if the total period of CMS downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime** of the continuous total sulfur monitoring system and/or control equipment while the emissions unit was in operation; and

x. the reason (if known) and the corrective actions taken (if any) for each event in (b)(viii) and (ix) that is required to be individually reported.

Each report shall address the operations conducted and data obtained during the previous calendar quarter

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime event shall be reported regardless if there is an exceedance of any applicable limit

*** Downtime is time when the unit is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

c) Testing Requirements

(1) Within 60 days of installation and at least once every three (3) years thereafter, the permittee shall conduct a RAA or RATA of each the continuous total sulfur (expressed as SO_2) monitoring system to demonstrate compliance with ORC section 3704.03(I). The Permittee shall also conduct cylinder gas audits each calendar quarter in which a RAA or RATA is not performed. For RAA and RATA reference method comparisons, the most current version of EPA Methods 15A or 16 C shall be used or other test method approved by Ohio EPA Central Office shall be used as the reference method. In addition, the principles of EPA Method 7E, section 8.3 may be used to dilute the fuel gas samples used for the reference method as necessary to render the samples safe for analysis.

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous total sulfur expressed as SO_2 monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements specified above, or other test method approved by Ohio EPA Central Office; and ORC section 3704.03(I).

C. Emissions Unit Terms and Conditions

1. B015, Crude 1 Heater

Operations, Property and/or Equipment Description:

Crude 1 Heater: PR-562954 - 428 mmBtu/hr (HHV rated) process heater fired with refinery fuel gas, natural gas, and/or LP gas with heater exhaust out of the Crude Convection Heater Stack.

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(D) (PTI – 04-01290 as issued on 7/25/2002)	See b)(2)a., b)(2)b, and b)(2)c. See section B.9.a), b), and c)
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, unless otherwise specified by the rule.
c.	OAC rule 3745-17-10(B)(1)	PE shall not exceed 0.020 pound per million Btu of heat input. See c)(1).
d.	OAC rule 3745-18-54(W)(1)	See b)(2)e.
e.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)f.
f.	40 CFR Part 60, Subpart J (40 CFR 60.100-109) [In accordance with 60.101 This emissions unit is a fuel gas combustion device located at a	See b)(2)c. and b)(2)d. [60.104(a)(1)]

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	petroleum refinery and subject to the applicable emissions limitations/ control requirements specified in this section.]	
g.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
h.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480-7575) [In accordance with 63.7575, this emissions unit is in the ”unit designed to fire gas 1 fuels” subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	See b)(2)g. and c)(3) (63.7500(a) Table 3 requirements)

(2) Additional Terms and Conditions

a. Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), this source shall comply with the sulfur dioxide (SO_2) emissions limit of 34.53 tons SO_2 per rolling 12-months and demonstrate compliance using the monitoring, record keeping and reporting requirements of Section B.9.a) through 9.c) of this permit.

b. Pursuant to Permit to Install 04-01290 issued 7/25/2002, this emission unit is subject to the requirements of 40 CFR 60 Subpart J.

c. The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA-recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis. Pursuant to the fuel gas definition in 40 CFR 60.101(d), this standard is also applicable if the permittee combines and combusts natural gas or liquefied petroleum (LP) gas in any proportion with refinery fuel gas in this emissions unit.

d. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

e. The emission limitation specified by OAC 3745-18-54(W)(1) is less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

f. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit.

g. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans requirements of Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A).

c) Operational Restrictions

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

(2) The quality of the natural gas, LP gas and/or refinery fuel gas burned in this emissions unit shall meet, on an “as burned” basis, a sulfur content that is sufficient to comply with the allowable hydrogen sulfide emission limitation of 0.10 grain per dry standard cubic foot as a volume-weighted, rolling 3-hour average.

(3) [40 CFR 63.7500(a) – Table 3]

An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in § 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

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

(2) The permittee shall maintain a written quality assurance/quality control plan for the continuous hydrogen sulfide monitoring system, designed to ensure continuous valid and representative readings of hydrogen sulfide emissions in units of the applicable standard(s). 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 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test

audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

(3) The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[40 CFR 60.2] and/or [40 CFR 63.2] and [Appendix F to 40 CFR Part 60]

(4) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (0.10 grain/dscf or 162 parts per million by volume dry basis) of H_2S 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_2S 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 60.107(a)(2), as follows

a. The span value for this instrument shall be 425 mg/dscm of H_2S.

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_2S in the fuel gas being burned.

c. The performance evaluations for this H_2S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations.

(5) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendix B, the permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous hydrogen sulfide monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(6) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F, the permittee shall operate and maintain equipment to continuously monitor and record hydrogen sulfide content of the fuel burned in this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

a. hydrogen sulfide content of the fuel burned in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

b. hydrogen sulfide content of the fuel burned, in units of the applicable standard(s) and in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous hydrogen sulfide monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous hydrogen sulfide monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

(7) Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), this source shall monitor and record the monthly average volumetric firing rate in units of standard cubic feet per month. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total SO_2 emission rates in units of tons using the methodology described in section f).

e) Reporting Requirements

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

(2) Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), the permittee shall submit quarterly deviation (excursion) reports that identify each month all exceedances of the following allowable emission limitations:

a. 34.53 tons SO_2 per rolling, 12-month period.

The quarterly deviation (excursion) reports may be submitted as part of the quarterly compliance reports required in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

(3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide content in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted within 30 days following the end of each calendar quarter and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total hydrogen sulfide emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;

xi. total duration of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also

include the date, time, and duration of any/each individual time period of excess emissions malfunction** of the continuous total sulfur monitoring system, emissions unit, and/or control equipment, and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility;

xii. total duration of CMS downtime for the reporting period, and if the total period CMS downtime*** is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime** of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report.

** each downtime event shall be reported regardless if there is an exceedance of any applicable limit

*** Downtime is time when the unit is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

(4) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

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

a. Emission Limitation:

34.53 tons SO_2 per rolling, 12-month period

Applicable Compliance Method:

Compliance shall begin after the completion of construction and the initial shakedown of the Coker Gas Plant (P068), and shall be demonstrated as follows:

i. multiply the monthly average total sulfur concentration (ppmv) by the molecular weight* of SO_2 (64 lbs/lbmol) and divide by the ideal gas

conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in the units of lb/MMSCF.

ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and

iii. add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

*this calculation assumes that 1 mole of total sulfur is equal to one mole of SO_2

b. Emission Limitation:

The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average H_2S concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA-recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide emission limitation(s) 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 Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

c. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, unless otherwise specified by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitation:

PE shall not exceed 0.020 pound per million Btu of heat input.

Applicable Compliance Method:

Compliance with this limit is demonstrated through permit condition in Section C. 1.c)(1), which requires the permittee to burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA - approved test methods may be used with prior approval from the Ohio EPA.

g) Miscellaneous Requirements

(1) None.

2. B019, Crude/Vac 2 Furnace

Operations, Property and/or Equipment Description:

Crude Vac 2 Heater PR-562945: 258 mmBtu/hr (HHV rated) process heater fired with refinery fuel gas, natural gas, and/or LP gas

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(D) 04-01290 issued 7/25/2002	Nitrogen oxides (NO_x) emissions shall not exceed 262.8 tons per rolling, 12-month period. Sulfur dioxide (SO_2) emissions shall not exceed 21.02 tons per rolling, 12-month period. See b)(2)a., b)(2)b. See section B.9.a)(2), and B.9.a)(3)
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, unless otherwise specified by the rule.
c.	OAC rule 3745-17-10(B)(1)	PE shall not exceed 0.020 pound per million Btu of heat input. See c)(1).
d.	OAC rule 3745-18-54(W)(1)	See b)(2)e.
e.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)f., and b)(2)g.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR Part 60, Subpart J (40 CFR 60.100-109) [In accordance with 60.101 This emissions unit is a fuel gas combustion device located at a petroleum refinery and subject to the applicable emissions limitations/ control requirements specified in this section.]	See b)(2)c. and b)(2)d. [60.104(a)(1)]
g.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
h.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480-7575) [In accordance with 63.7575, this emissions unit is in the ”unit designed to fire gas 1 fuels” subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	See b)(2)i., and c)(3). (63.7500(a) Table 3 requirements)

(2) Additional Terms and Conditions

a. Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), Section B.9.a) through 9.c) of this permit outlines the monitoring, record keeping, reporting, required to maintain compliance with the SO_2 limit.

b. Pursuant to Permit to Install 04-01290 issued 7/25/2002, this emissions unit is subject to the requirements of 40 CFR 60 Subpart J.

c. The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA-recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis. Pursuant to the fuel gas definition in 40 CFR 60.101(d), this standard is also applicable if the permittee combines and combusts natural gas or liquefied petroleum (LP) gas in any proportion with refinery fuel gas in this emissions unit.

d. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

e. The emission limitation specified by OAC 3745-18-54(W)(1) is less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

f. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit.

g. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans requirements of Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A).

c) Operational Restrictions

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

(2) The quality of the natural gas, LP gas and/or refinery fuel gas burned in this emissions unit shall meet, on an “as burned” basis, a sulfur content that is sufficient to comply with the allowable hydrogen sulfide emission limitation of 0.10 grain per dry standard cubic foot as a volume-weighted, rolling 3-hour average.

(3) [40 CFR 63.7500(a) – Table 3]

An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in § 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

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

(2) The permittee shall maintain a written quality assurance/quality control plan for the continuous hydrogen sulfide monitoring system, designed to ensure continuous valid

and representative readings of hydrogen sulfide emissions in units of the applicable standard(s). 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 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

(3) The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[40 CFR 60.2] and/or [40 CFR 63.2] and [Appendix F to 40 CFR Part 60]

(4) Each month, the permittee shall monitor and record the daily average volumetric firing rate in units of standard cubic feet per hour. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total NO_x emission rates in units of tons in accordance with the procedure outlined in section f).

(5) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (0.10 grain/dscf or 162 parts per million by volume dry basis) of H_2S in the refinery fuel gas, the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S 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 shall be 425 mg/dscm of H_2S.

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_2S in the fuel gas being burned.

c. The performance evaluations for this H_2S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations.

(6) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendix B, the permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous hydrogen sulfide monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(7) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F, the permittee shall operate and maintain equipment to continuously monitor and record hydrogen sulfide

content of the fuel burned in this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

a. hydrogen sulfide content of the fuel burned in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

b. hydrogen sulfide content of the fuel burned, in units of the applicable standard(s) and in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous hydrogen sulfide monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous hydrogen sulfide monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

(8) In order to demonstrate compliance with the 21.02 tons SO_2 per rolling, 12-month period emission limitation, thepermittee shall monitor and record the monthly average volumetric firing rate in units of standard cubic feet per month. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total SO_2 emission rates in units of tons in accordance with the procedure outlined in section f).

e) Reporting Requirements

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

(2) The permittee shall submit quarterly deviation (excursion) reports that identify each month all exceedances of the following allowable emission limitations:

a. 262.8 tons NO_x per rolling, 12-month period; and

b. 21.02 tons SO_2 per rolling, 12-month period.

The quarterly deviation (excursion) reports may be submitted with the quarterly compliance reports in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

(3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide content in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted within 30 days following the end of each calendar quarter and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;

vii. results and dates of quarterly cylinder gas audits;

viii. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

ix. unless previously submitted, the results of any relative accuracy test audit showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;

x. total duration of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility;

xi. total duration of CMS downtime for the reporting period, and if the total period CMS downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation; and

xii. the reason (if known) and the corrective actions taken (if any) for each event inb.x. andb.xi.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime event shall be reported regardless if there is an exceedance of any applicable limit

*** Downtime is time when the unit is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

(4) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

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

a. Emission Limitation:

262.8 tons NO_x per rolling, 12-month period

Applicable Compliance Method:

The NO_x emission limitation above shall be demonstrated as follows:

i. multiply the monthly total gas flow (mmscf) by the monthly average fuel gas heating value (Btu/scf) and then multiply by the most recent NO_x emission factor (lb/mmBtu) determined by stack testing; and

ii. add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total NO_x emissions.

If required, the permittee shall establish a new NO_x emission factor in units of pounds NO_x per million Btu of heat input using Methods 3A, 7E and 19 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

21.02 tons SO_2 per rolling, 12-month period

Applicable Compliance Method:

The SO_2 emission limitation above shall be demonstrated as follows:

i. multiply the monthly average H_2S concentration (ppmv) by the molecular weight* of SO_2 (64 lbs/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in the units of lb/MMSCF.

ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and

iii. add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

Beginning after the completion of construction and the initial shakedown of the Coker Gas Plant (P068), compliance with this emissions limit shall be demonstrated by using the total sulfur value recorded in accordance with the terms and conditions of Section B.9.b) in place of the H2S concentration.

*this formula assumes that 1 mole H_2S converts to 1 mole of SO_2.

c. Emission Limitation:

The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average H_2S concentration in excess of 230 mg/dscm (0.10

gr/dscf), or the U.S. EPA-recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide emission limitation(s) 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 Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

d. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, unless otherwise specified by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

e. Emission Limitation:

PE shall not exceed 0.020 pound per million Btu of heat input.

Applicable Compliance Method:

Compliance with this limit is demonstrated through permit condition Section C. 2.c)(1), which requires the permittee to burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA - approved test methods may be used with prior approval from the Ohio EPA.

g) Miscellaneous Requirements

(1) None.

3. B029, ADHT Furnace

Operations, Property and/or Equipment Description:

A-DHT Furnace: 22.8 mmBtu/hr (LHV rated) process heater fired with refinery fuel gas, natural gas, and/or LP Gas with low NO_x burners

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) (PTI 04-01346 modification issued on 1/18/2007)	Carbon monoxide (CO) emissions shall not exceed 1.88 pounds per hour. Nitrogen oxides (NO_x) emissions shall not exceed 1.60 pounds per hour. Particulate matter emissions less than or equal to 10 microns in diameter (PM_{10}) shall not exceed 0.17 pound per hour. Volatile organic compound (VOC) emissions shall not exceed 0.12 pound per hour. See b)(2)a., c. and d.
b.	OAC rule 3745-31-05(D) (PTI 04-01346 modification issued on 1/18/2007)	CO emissions shall not exceed 7.21 tons per rolling, 12-month period. NO_x emissions shall not exceed 6.13 tons per rolling, 12-month period. PM_{10} emissions shall not exceed 0.65 ton per rolling, 12-month period. SO_2 emissions shall not exceed 2.32 tons per rolling, 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		VOC emissions shall not exceed 0.47 ton per rolling, 12-month period. See b)(2)b. and b)(2)c.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, unless otherwise specified by the rule. See c)(1).
d.	OAC rule 3745-17-10(B)(1)	PE shall not exceed 0.020 pound per million Btu of heat input. See c)(1)
e.	OAC rule 3745-18-54(W)(1)	See b)(2)e.
f.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)f.
g.	40 CFR Part 60, Subpart J (40 CFR 60.100-109) [In accordance with 60.101 This emissions unit is a fuel gas combustion device located at a petroleum refinery that was installed after Jun 11, 1973 and prior to May 14, 2007 and subject to the applicable emissions limitations/ control requirements specified in this section.]	See b)(2)c., and b)(2)d. [60.104(a)(1)]
h.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
i.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480-7575) [In accordance with 63.7575, this	See b)(2)g. and c)(2) (63.7500(a))

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	emissions unit is an existing process heater in the ”unit designed to fire gas 1 fuels” subcategory located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	

(2) Additional Terms and Conditions

a. The requirements of this rule include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-17-10(B)(1), OAC rule 3745-31-05(D), and 40 CFR Part 60, Subpart J.

b. The A-DHT Furnace (B029) shall be limited to a maximum firing rate of 175,200 mmBtu per rolling, 12-month period.

c. The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis. Pursuant to the fuel gas definition in 40 CFR 60.101(d), this standard is also applicable if the permittee combines and combusts natural gas or liquefied petroleum (LP) gas in any proportion with refinery fuel gas in this emissions unit.

d. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

e. The emission limitation specified by OAC 3745-18-54(W)(1) is less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

f. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit.

g. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, and site-specific monitoring plans requirements of Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A).

c) Operational Restrictions

(1) The permittee shall burn only natural gas, LP gas, and refinery fuel gas in this emissions unit.

(2) [40 CFR 63.7500(a) – Table 3]

An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in § 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, LP gas, or refinery fuel gas, the permittee shall maintain a record of the type, quantity, and heating value in BTU/dscf of fuel burned in this emissions unit.

(2) The permittee shall maintain a written quality assurance/quality control plan for the continuous hydrogen sulfide monitoring system, designed to ensure continuous valid and representative readings of hydrogen sulfide emissions in units of the applicable standard(s). 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 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

(3) The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[40 CFR 60.2] and/or [40 CFR 63.2] and [Appendix F to 40 CFR Part 60]

(4) The permittee shall monitor and record the daily firing rate in terms of standard cubic feet per day, mmscf per day. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total CO, NO_x, PM_{10}, SO_2, and VOC emission rates in units of tons in accordance with the procedure outlined in section f).

(5) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (0.10 grain/dscf or 162 parts per million by volume dry basis) of H_2S in the refinery fuel gas (and if applicable, combined fuel firing as noted in b)(2)d. above), the permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S 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 shall be 425 mg/dscm of H_2S.

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_2S in the fuel gas being burned.

c. The performance evaluations for this H_2S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations.

(6) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendix B, the permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous hydrogen sulfide monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(7) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F, the permittee shall operate and maintain equipment to continuously monitor and record hydrogen sulfide content of the fuel burned in this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

a. hydrogen sulfide content of the fuel burned in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

b. hydrogen sulfide content of the fuel burned, in units of the applicable standard(s) and in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system;

g. the date, time, and hours of operation of the emissions unit without the continuous hydrogen sulfide monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous hydrogen sulfide monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in g. and h..

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

e) Reporting Requirements

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

(2) The permittee shall submit quarterly deviation (excursion) reports that identify each month when:

a. the firing rate of this emissions unit exceeded 175,200 mmBtu per rolling, 12-month period; and

b. SO_2 emissions from this emissions unit exceeded 2.32 tons per rolling, 12-month period.

The quarterly deviation (excursion) reports may be submitted as part of the quarterly compliance reports in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

(3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide content in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted within 30 days following the end of each calendar quarter and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;

vii. results and dates of quarterly cylinder gas audits;

viii. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

ix. unless previously submitted, the results of any relative accuracy test audit showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;

x. total duration of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility;

xi. total duration of CMS downtime for the reporting period, and if the total period CMS downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime** of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation; and

xii. the reason (if known) and the corrective actions taken (if any) for each event in b.x. and b.xi.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime event shall be reported regardless if there is an exceedance of any applicable limit.

*** Downtime is time when the unit is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

(4) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

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

a. Emission Limitation:

CO emissions shall not exceed 1.88 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (22.8 mmBtu/hr) by the CO emission factor from AP-42 Table 1.4-1 dated 7/98 (84 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

CO emissions shall not exceed 7.21 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum allowable annual heat input (175,200 mmBtu/yr) by the CO emission factor from AP-42 Table 1.4-1 dated 7/98 (84 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf) and divided by 2,000 pounds per ton. Therefore, as long as compliance with the annual firing rate restriction is maintained, compliance with the annual limitation shall be demonstrated.

c. Emission Limitation:

NO_x emissions shall not exceed 1.60 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (22.8 mmBtu/hr) by the manufacturer's NO_x emission factor (0.07 lb/mmBtu).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitation:

NO_x emissions shall not exceed 6.13 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum allowable annual heat input (175,200 mmBtu/yr) by the manufacturer's NO_x emission factor (0.07 lb/mmBtu) and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emissions limitation is assumed if the permittee maintains compliance with the annual firing rate restriction.

e. Emission Limitation:

PM_{10} emissions shall not exceed 0.17 pound per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (22.8 mmBtu/hr) by the PM_{10} emission factor from AP-42 Table 1.4-2 dated 7/98 (7.6 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

f. Emission Limitation:

PM_{10} emissions shall not exceed 0.65 ton per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum allowable annual heat input (175,200 mmBtu/yr) by the PM_{10} emission factor from AP-42 Table 1.4-2 dated 7/98 (7.6 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf) and divided by 2,000 pounds per ton. Therefore, as long as compliance with the annual firing rate restriction is maintained, compliance with the annual limitation shall be demonstrated.

g. Emission Limitation:

SO_2 emissions shall not exceed 2.32 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum allowable annual heat input (175,200 mmBtu/yr) by the NSPS subpart J allowable concentration of H_2S in fuel gas (160 ppm) divided by 1 million,

multiplied by the molecular weight of SO_2 (64 lb/lb-mole), divided by the ideal gas volume (387 ft^3/lb-mole), divided by the conservative heating value for refinery fuel gas (1000 Btu/scf) and multiplied by ($1x10^6$ Btu/mmBtu), and divided by 2,000 pounds per ton.

Prior to the start-up of the Coker Gas Plant (P068), the SO_2 emission limitation above, shall be demonstrated as follows:

i. Multiply the monthly average H_2S concentration by the molecular weight* of SO_2 (64 lbs/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in the units of lb/MMSCF.

ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and

iii. add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

*this formula assumes that 1 mole of H_2S or total Sulfur converts to 1 mole of SO_2

Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), compliance with this emissions limit shall be demonstrated by replacing the monthly average H_2S concentration referenced in f)(1)g.i above, with the total sulfur value recorded in accordance with the terms and conditions of Section B.9, when not firing fuel gas from the East Side Mix Drum.

Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), whenever this heater is fired using fuel gas from the East Side Mix Drum, the compliance with this emissions limit shall be demonstrated by replacing the monthly average H_2S concentration referenced in f)(1)g.i above, with the monthly average H_2S concentration in the fuel gas plus 35 ppm sulfur to account for the non-H_2S sulfur in the fuel gas, based on testing at the refinery, or other more recent measured value.

h. Emission Limitation:

VOC emissions shall not exceed 0.12 pound per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (22.8 mmBtu/hr) by the VOC emission factor from AP-42 Table 1.4-2 dated 7/98 (5.5 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A.

Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

i. Emission Limitation:

VOC emissions shall not exceed 0.47 ton per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum allowable annual heat input (175,200 mmBtu/yr) by the VOC emission factor from AP-42 Table 1.4-2 dated 7/98 (5.5 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf) and divided by 2,000 pounds per ton. Therefore, as long as compliance with the hourly emission limitation and the annual firing rate restriction is maintained, compliance with the annual emission limitation shall be demonstrated.

j. Emission Limitation:

The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis.

Applicable Compliance Method:

Ongoing compliance shall be demonstrated based upon the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

k. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, unless otherwise specified by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

l. Emission Limitation:

PE shall not exceed 0.020 pound per million Btu of heat input.

Applicable Compliance Method:

Compliance with this emission limitation is demonstrated through condition c)(1), which requires this permittee to burn only refinery fuel gas, natural gas, or LP gas in this emissions unit..

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

g) Miscellaneous Requirements

(1) None.

4. B031, Vac 1 Heater

Operations, Property and/or Equipment Description:

Vacuum 1 Heater: 144 mmBtu/hr (HHV rated) process heater fired with refinery fuel gas, natural gas, and/or LP Gas. This heater vents out of the Crude Convection Heater Stack.

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)	Carbon monoxide (CO) emissions shall not exceed 12.45 pounds per hour daily average. Nitrogen oxides (NO_x) emissions shall not exceed 10.6 pounds per hour daily average. Particulate matter emissions less than or equal to 10 microns in diameter (PM_{10}) shall not exceed 0.28 pounds per hour daily average. Volatile organic compound (VOC) emissions shall not exceed 1.29 pounds per hour daily average. See b)(2)b.
b.	OAC rule 3745-31-05(D)	See b)(2)a. and b)(2)b. See section B.9.a)(2), and B.9.a)(3)
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, unless otherwise specified by the rule.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-10(B)(1)	PE shall not exceed 0.020 pound per million Btu of heat input. See c)(1).
e.	OAC rule 3745-18-54(W)(1)	See b)(2)e.
f.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)f.
g.	40 CFR Part 60, Subpart J (40 CFR 60.100-109) [In accordance with 60.101 This emissions unit is a fuel gas combustion device located at a petroleum refinery and subject to the applicable emissions limitations/ control requirements specified in this section.]	See b)(2)c. and b)(2)d. [60.104(a)(1)]
h.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
i.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480-7575) [In accordance with 63.7575, this emissions unit is in the ”unit designed to fire gas 1 fuels” subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	See b)(2)g. and c)(3) (63.7500(a) Table 3 requirements)

(2) Additional Terms and Conditions

a. Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), this source shall comply with the sulfur dioxide (SO_2) emissions limit of 11.62 tons SO_2 per rolling 12-months and demonstrate compliance using the monitoring, record keeping and reporting requirements of Section B.9.a) through 9.c) of this permit.

b. Pursuant to Permit to Install 04-01290 issued 7/25/2002, this emissions unit is subject to the requirements of 40 CFR 60 Subpart J.

c. The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA-recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis. Pursuant to the fuel gas definition in 40 CFR 60.101(d), this standard is also applicable if the permittee combines and combusts natural gas or liquefied petroleum (LP) gas in any proportion with refinery fuel gas in this emissions unit.

d. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

e. The emission limitation specified by OAC 3745-18-54(W)(1) is less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

f. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit.

g. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans requirements of Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A).

c) Operational Restrictions

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

(2) The quality of the natural gas, LP gas and/or refinery fuel gas burned in this emissions unit shall meet, on an “as burned” basis, a sulfur content that is sufficient to comply with the allowable hydrogen sulfide emission limitation of 0.10 grain per dry standard cubic foot as a volume-weighted, rolling 3-hour average.

(3) [40 CFR 63.7500(a) – Table 3]
An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in § 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not

operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

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

(2) The permittee shall maintain a written quality assurance/quality control plan for the continuous hydrogen sulfide monitoring system, designed to ensure continuous valid and representative readings of hydrogen sulfide emissions in units of the applicable standard(s). 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 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

(3) The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[40 CFR 60.2] and/or [40 CFR 63.2] and [Appendix F to 40 CFR Part 60]

(4) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (0.10 grain/dscf or 162 parts per million by volume dry basis) of H_2S 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_2S 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 shall be 425 mg/dscm of H_2S.

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_2S in the fuel gas being burned.

c. The performance evaluations for this H_2S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations.

(5) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendix B, the permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous hydrogen sulfide monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(6) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F, the permittee shall operate and maintain equipment to continuously monitor and record hydrogen sulfide content of the fuel burned in this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

a. hydrogen sulfide content of the fuel burned in parts per million for each cycle time of the analyzer, pursuant to 40 CFR, Part 60.7(f);

b. hydrogen sulfide content of the fuel burned, in units of the applicable standard(s) and in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous hydrogen sulfide monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous hydrogen sulfide monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in g. and h..

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

(7) Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), this source shall monitor and record the monthly average volumetric firing rate in units of standard cubic feet per month. From these data, the permittee shall

calculate and maintain records of the monthly and rolling, 12-month total SO_2 emission rates in units of tons using the methodology described in section f).

e) Reporting Requirements

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

(2) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide content in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted within 30 days following the end of each calendar quarter and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;

vii. results and dates of quarterly cylinder gas audits;

viii. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

ix. unless previously submitted, the results of any relative accuracy test audit showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;

x. total duration of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility;

xi. total duration of CMS downtime for the reporting period, and if the total period CMS downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime** of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation; and

xii. the reason (if known) and the corrective actions taken (if any) for each event in b.x. and xi.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime event shall be reported regardless if there is an exceedance of any applicable limit

*** Downtime is time when the unit is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

(3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

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

a. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, unless otherwise specified by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average H_2S concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA-recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide emission limitation(s) 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 Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

c. Emission Limitation:

11.62 tons SO_2 per rolling, 12-month period

Applicable Compliance Method:

Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), this source shall demonstrate compliance with this emissions limit by using the following method:

i. Multiply the monthly average total sulfur concentration recorded in accordance with the terms and conditions of Section B.9.a) by the molecular weight* of SO_2 (64 lbs/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in the units of lb/MMSCF.

ii. Multiply the SO2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and

iii. add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO2 emissions.

*this formula assumes that 1 mole of total Sulfur converts to 1 mole of SO2

d. Emission Limitation:

12.45 lb CO per hour, daily average

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate on an hourly basis (151 mmBtu/hr (HHV)) by the CO emission factor from AP-42 Table 1.4-1 dated 7/98 (84 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf). NOTE: BPH requested that the BAT limits have an additional 5% for short term design capacity, 144 mmBtu/hr/0.95 = 151 mmBtu/hr.

If required, compliance shall be demonstrated based upon the procedures specified in Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

e. Emission Limitation:

10.6 lb NO_x per hour, daily average

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate on an hourly basis (151 mmBtu/hr (HHV)) by the NO_x emission factor for this emissions unit specified in PTI 04-959 issued 5/30/2006 of 0.07 lb NO_x/mmBtu. NOTE: BPH requested that the BAT limits have an additional 5% for short term design capacity, 144 mmBtu/hr/0.95 = 151 mmBtu/hr.

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

f. Emission Limitation:

PM10 emissions shall not exceed 0.28 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum hourly firing rate (151 mmBtu/hr (HHV)) by the PM (Filterable) emission factor from AP-42 Table 1.4-2 dated 7/98 (1.9 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf). NOTE: BPH requested that the BAT limits have an additional 5% for short term design capacity, 144 mmBtu/hr/0.95 = 151 mmBtu/hr.

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

g. Emission Limitation:

OC emissions shall not exceed 1.29 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum hourly firing rate (151 mmBtu/hr) by the TOC emission factor (11 lb/mmscf) minus the Methane emission factor (2.3 lb/mmscf) from AP-42 Table 1.4-2 dated 7/98, (which equals 8.7 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf). NOTE: BPH requested that the BAT limits have an additional 5% for short term design capacity, 144 mmBtu/hr/0.95 = 151 mmBtu/hr.

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

h. Emission Limitation:

PE shall not exceed 0.020 pound per million Btu of heat input.

Applicable Compliance Method:

Compliance with this limit is demonstrated through condition c)(1), which requires the permittee to burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA - approved test methods may be used with prior approval from the Ohio EPA.

g) Miscellaneous Requirements

(1) None.

5. B032, Coker 3 Furnace

Operations, Property and/or Equipment Description:

Coker 3 Furnace: 256 mmBtu/hr (HHV rated and 230 mmBtu/hr LHV) process heater fired with refinery fuel gas, natural gas, and/or LP Gas

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) (PTI 04-01471, issued 7/17/2007)	Carbon monoxide (CO) emissions shall not exceed 18.94 pounds per hour and 82.96 tons per rolling, 12-month period. Nitrogen oxides (NO_x) emissions shall not exceed 14.95 pounds per hour and 65.48 tons per rolling, 12-month period. Particulate matter emissions less than or equal to 10 microns in diameter (PM_{10}) shall not exceed 1.71 pounds per hour and 7.51 tons per rolling, 12-month period. Sulfur dioxide (SO_2) emissions shall not exceed 20.46 tons per rolling, 12-month period. Volatile organic compound (VOC) emissions shall not exceed 1.24 pounds per hour and 5.43 tons per rolling, 12-month period. See b)(2)a. and b.
b.	OAC rule 3745-31-05(D)	See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, unless otherwise specified by the rule.
d.	OAC rule 3745-17-10(B)(1)	PE shall not exceed 0.020 pound per million Btu of heat input. See c)(1)
e.	OAC rule 3745-18-54(W)(1)	See b)(2)c.
f.	40 CFR Part 60, Subpart A	See b)(2)e.
g.	40 CFR Part 60, Subpart J (40 CFR 60.100-109) [In accordance with 60.101 This emissions unit is a fuel gas combustion device located at a petroleum refinery that was installed after Jun 11, 1973 and prior to May 14, 2007 and subject to the applicable emissions limitations/ control requirements specified in this section.]	See b)(2)b., b)(2)d. [60.104(a)(1)]
h.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
i.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480-7575) [In accordance with 63.7575, this emissions unit is an existing process heater in the ”unit designed to fire gas 1 fuels” subcategory at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	See b)(2)f. and c)(3). (63.7500(a))

(2) Additional Terms and Conditions

a. The requirements of this rule include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-17-10(B)(1), 40 CFR Part 60, Subpart J, and OAC rule 3745-31-05(D).

b. The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration greater than 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis. Pursuant to the fuel gas definition in 40 CFR 60.101(d), this standard is also applicable if the permittee combines and combusts natural gas or liquefied petroleum (LP) gas in any proportion with refinery fuel gas in this emissions unit.

c. The emission limitation specified by OAC rule 3745-18-54(W)(1) is less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

d. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

e. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit.

f. This emissions unit is subject to the initial notification requirements in 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A).

c) Operational Restrictions

(1) The permittee shall burn only natural gas, LP gas, and refinery fuel gas in this emissions unit.

(2) The quality of the natural gas, LP gas and/or refinery fuel gas burned in this emissions unit shall meet, on an “as burned” basis, a sulfur content that is sufficient to comply with the allowable hydrogen sulfide emission limitation of 0.10 grain per dry standard cubic foot as a volume-weighted, rolling 3-hour average.

(3) [40 CFR 63.7500(a) – Table 3] An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in § 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), if the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

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

(2) The permittee shall maintain a written quality assurance/quality control plan for the continuous hydrogen sulfide monitoring system, designed to ensure continuous valid and representative readings of hydrogen sulfide emissions in units of the applicable standard(s). 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 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

(3) The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[40 CFR 60.2] and/or [40 CFR 63.2] and [Appendix F to 40 CFR Part 60]

(4) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (0.10 grain/dscf or 162 parts per million by volume dry basis) of H_2S 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_2S 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 shall be 425 mg/dscm of H_2S.

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_2S in the fuel gas being burned.

c. The performance evaluations for this H_2S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations.

(5) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendix B, the permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous hydrogen sulfide monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance

Specification 7. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(6) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F, the permittee shall operate and maintain equipment to continuously monitor and record hydrogen sulfide content of the fuel burned in this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

a. hydrogen sulfide content of the fuel burned in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

b. hydrogen sulfide content of the fuel burned, in units of the applicable standard(s) and in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system;

g. the date, time, and hours of operation of the emissions unit without the continuous hydrogen sulfide monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous hydrogen sulfide monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in g. and h..

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

(7) The permittee shall monitor and record the daily average firing rate in terms of standard cubic feet per hour. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total SO_2, CO, NO_x, PE, and VOC emission rates in units of tons per month and tons per year in accordance with the procedure outlined in section f)

e) Reporting Requirements

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

(2) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide content in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be within 30 days following the end of each calendar quarter and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;

vii. results and dates of quarterly cylinder gas audits;

viii. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

ix. unless previously submitted, the results of any relative accuracy test audit showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;

x. total duration of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility;

xi. total duration of CMS downtime for the reporting period, and if the total period CMS downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime** of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation; and

xii. the reason (if known) and the corrective actions taken (if any) for each event in b.x. and xi.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime event shall be reported regardless if there is an exceedance of any applicable limit

*** Downtime is time when the unit is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

(3) The permittee shall submit deviation (excursion) reports that identify each day when the CO, NO_x, PE, SO_2, and/or VOC pound per hour and/or rolling, 12-month emission limitations specified under b)(1)a. were exceeded, in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

(4) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

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

a. Emission Limitation:

CO emissions shall not exceed 18.94 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (230 mmBtu/hr, lower heating value (LHV)) by the CO emission factor from AP-42 Table 1.4-1 dated 7/98 (84 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

CO emissions shall not exceed 82.96 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the hourly emission limitation (18.94 lbs/hr) by the maximum annual hours of operation (8,760 hrs/yr) and divided by 2,000 pounds per ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual limitation shall be demonstrated.

c. Emission Limitation:

NO_x emissions shall not exceed 14.95 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (230 mmBtu/hr, LHV) by the NO_x emission factor for this emissions unit as determined using Method 7E of 40 CFR Part 60, Appendix A on August 17, 1999 (0.065 lb/mmBtu).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 7E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitation:

NO_x emissions shall not exceed 65.48 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the rolling, 12-month firing rate in mmBtu by the NO_x emission factor determined during the most recent emissions test that demonstrated compliance divided by 2,000 pounds per ton. On August 17, 1999, the permittee conducted a Method 7E compliance test demonstrating an average NO_x emission rate of 0.065 lb/mmBtu.

e. Emission Limitation:

PM_{10} emissions shall not exceed 1.71 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (230 mmBtu/hr, LHV) by the PM_{10} emission factor from AP-42 Table 1.4-2 dated 7/98 (7.6 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

f. Emission Limitation:

PM_{10} emissions shall not exceed 7.51 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the allowable hourly emission rate (1.71 lbs/hr) by the maximum annual hours of operation (8,760 hrs/yr) and divided by 2,000 pounds per ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual limitation shall be demonstrated.

g. Emission Limitation:

SO_2 emissions shall not exceed 20.46 tons per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum firing rate (230 mmBtu/hr, LHV) by the NSPS subpart J allowable concentration of H_2S in fuel gas (162 ppmv) divided by 1 million, multiplied by the molecular weight of SO_2 (64 lb/lb-mole), divided by the ideal gas volume (379 ft^3/lb-mole), divided by an annual average heating value of fuel burned (1347 Btu per standard cubic foot), and multiplied by ($1x10^6$ Btu/mmBtu), multiplying by the maximum hours of usage (8760 hr/yr) and divided by 2,000 pounds per ton.

i. Prior to the start-up of the Coker Gas Plant (P068), the SO_2 emission limitation above, shall be demonstrated as follows: Multiply the monthly average H_2S concentration by the molecular weight of SO_2 (64 lb/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in units of lb/MMSCF
ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and
iii. Add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

*this formula assumes that 1 mole of H_2S or total sulfur converts to 1 mole of SO_2

Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), compliance with this emissions limit shall be demonstrated by replacing the monthly average H_2S concentration referenced in f)(1)g.i above, with the total sulfur value recorded in section B.9.

h. Emission Limitation:

VOC emissions shall not exceed 1.24 pounds per hour.

Applicable Compliance Method:

The hourly emission limitation was developed by multiplying the maximum firing rate (230 mmBtu/hr, LHV) by the VOC emission factor from AP-42 Table 1.4-2 dated 7/98 (5.5 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-2 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with this emission limitation through emission testing performed in accordance with Methods 1 through 4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A. Use of Method 18, 25 or 25A is to be selected based on the results of pre-survey stack sampling and U.S. EPA guidance documents. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

i. Emission Limitation:

VOC emissions shall not exceed 5.43 ton per rolling, 12-month period.

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the allowable hourly emission rate (1.24 lbs/hr) by the maximum annual hours of operation (8,760 hrs/yr) and divided by 2,000 pounds per ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual limitation shall be demonstrated.

j. Emission Limitation:

The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide emission limitation(s) 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 Section of this permit; and through demonstration of compliance

with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

k. Emission Limitation:

Visible PE shall not exceed 20% opacity, unless otherwise specified by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

l. Emission Limitation:

PE shall not exceed 0.020 pound per million Btu of heat input.

Applicable Compliance Method:

Compliance with this emission limitation is demonstrated through compliance with the Operational Restrictions in permit condition c)(1), which requires this permittee to burn only refinery fuel gas, natural gas, or LP gas in this emissions unit..

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

g) Miscellaneous Requirements

(1) None.

6. B036, Reformer 3 Heater

Operations, Property and/or Equipment Description:

519 mmBtu/hr (HHV rated) Reformer 3 Heater fired with refinery fuel gas

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) b)(1)j., d)(18, d)(19), d)(20), d)(21) and e)(8)

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.	ORC 3704.03(T)	Carbon monoxide (CO) emissions shall not exceed 18.6 pounds per hour and 81.61 tons per rolling, 12-month period. Nitrogen oxides (NO_x) emissions shall not exceed 0.045 pound per million British thermal unit (lb/MMBtu) on a daily, average basis and 79.56 tons per rolling, 12-month period. Sulfur dioxide (SO_2) emissions shall not exceed 30.00 tons per rolling, 12-month period. Volatile organic compounds (VOC) emissions shall not exceed 2.8 pounds per hour and 12.28 tons per rolling, 12-month period. See b)(2)b. b)(2)c. and b)(2)j.
b.	OAC rule 3745-31-10 to 20	Particulate matter emissions less than or equal to 10 microns in diameter (PM_{10}) / particulate matter emissions less than or equal to 2.5 microns in diameter ($PM_{2.5}$) shall not exceed 7.6 pounds per million standard cubic feet of fuel gas burned, 3.9 pounds per hour, and 16.94 tons per

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rolling, 12-month period. See b)(2)h.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.
d.	OAC rule 3745-17-10(B)	See b)(2)a.
e.	OAC rule 3745-18-54(W)(1)	See b)(2)i.
f.	OAC rule 3745-21-07(B)	See b)(2)d.
g.	OAC rule 3745-21-08(B)	See b)(2)e.
h.	40 CFR Part 60, Subpart Ja	See b)(2)c. and b)(2)g.
i.	40 CFR Part 63, Subpart DDDDD	See b)(2)f.
j.	ORC 3704.03(F)(4)(c)	See d)(18, d)(19), d)(20), d)(21) and e)(8).

(2) Additional Terms and Conditions

a. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-10 through 20.

b. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart Ja.

c. In accordance with 40 CFR 60.102a(g)(1), the permittee shall comply with either b)(2)c.i. or c.ii. below.

i. The permittee shall not discharge or cause the discharge of any gases into the atmosphere that contain SO_2 in excess of 20 ppmv (dry basis, corrected to 0 percent excess air) determined hourly on a 3-hour rolling average basis and SO_2 in excess of 8 ppmv (dry basis, corrected to 0 percent excess air), determined daily on a 365 successive day rolling average basis [*40 CFR 60.102a(g)(1)(i)]*; or

ii. The permittee shall not burn in any fuel gas combustion device any fuel gas that contains H_2S in excess of 162 ppmv determined hourly on 3-hour rolling average basis and H_2S in excess of 60 ppmv determined daily on a

365 successive calendar day rolling average basis [*40 CFR 60.102a(g)(1)(ii)*].

iii. The permittee plans to comply with SO_2 limits in permit condition c.ii. per 60.102a(g)(1)(ii). Therefore, the remaining monitoring and recordkeeping requirements in this permit are reflective of that compliance option. If the permittee decides to revise the compliance option at a later date as allowed by 40 CFR 60.102a(g)(1), this will be allowed upon notification to OEPA.

d. The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On February 18, 2008, OAC rule 3745-21-07 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

e. The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in this Permit to Install.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

f. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, and site-specific monitoring plans requirements of Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A).

g. The permittee shall not discharge to the atmosphere any emissions of NO_x in excess of 40 ppmv (dry basis, corrected to 0 percent excess air) on a 30-day rolling average basis [*40 CFR 60.102a(g)(2)*].

h. All PM_{10} particulate emissions are assumed to be $PM_{2.5}$.

i. The emission limitation specified by OAC rule 3745-18-54(W)(1) of 0.29 lb SO_2/MMbtu is less stringent than the limitation established by ORC 3704.03(T).

j. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 through 20.

c) Operational Restrictions

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

(2) [40 CFR 63.7500(a) – Table 3] A new process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in § 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), if the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

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, quantity, and heating value in Btu/dscf of the fuel burned.

(2) The permittee shall comply with either (2)a. or (2)b and has chosen to comply with (2)b.

a. The permittee shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration (dry basis, 0 percent excess air) of SO_2 emissions into the atmosphere. The monitor must include an O_2 monitor for correcting the data for excess air [*40 CFR 60.107a(a)(1)*]. The permittee has chosen to comply using the H_2S monitoring system permit condition in term d)(2)b.

b. The permittee shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration by volume (dry basis) of H_2S in the fuel gases before being burned in any fuel gas combustion device.

i. The permittee shall install, operate, and maintain each H_2S monitor according to Performance Specification 7 of appendix B to part 60. The span value for this instrument is 300 ppmv H_2S.

ii. The permittee shall conduct performance evaluations for each H_2S monitor according to the requirements of §60.13(c) and Performance Specification 7 of appendix B to part 60. The permittee shall use Method 11, 15, or 15A of appendix A–5 to part 60 or Method 16 of appendix A–6 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses,” (incorporated by reference—see 60.17) is an acceptable alternative to EPA Method 15A of appendix A–5 to part 60.

iii. The permittee shall comply with the applicable quality assurance procedures in appendix F to part 60 for each H_2S monitor.

iv. 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_2S in the fuel gas being burned.

c. The permittee is not required to comply with permit conditions in 60.107a(a)(1) for fuel gas streams that are exempt under 60.102a(h) and fuel gas streams combusted in a process heater or other fuel gas combustion device that are inherently low in sulfur content. Fuel gas streams meeting one of the following requirements will be considered inherently low in sulfur content. [40 CFR 60.107a(a)(3)]

i. Pilot gas for heaters and flares.

ii. Fuel gas streams that meet a commercial-grade product specification for sulfur content of 30 ppmv or less. In the case of a liquefied petroleum gas (LPG) product specification in the pressurized liquid state, the gas phase sulfur content should be evaluated assuming complete vaporization of the LPG and sulfur containing-compounds at the product specification concentration.

iii. Fuel gas streams produced in process units that are intolerant to sulfur contamination, such as fuel gas streams produced in the hydrogen plant, catalytic reforming unit, isomerization unit, and HF alkylation process units.

iv. Other fuel gas streams that an owner or operator demonstrates are low-sulfur according to the procedures in paragraph (b) of this section.

d. If the composition of an exempt fuel gas stream changes, the owner or operator must follow the procedures in 60.107a(b)(3).

(3) The permittee may apply for an exemption from the H_2S monitoring requirements in 60.107a(a)(2). for a fuel gas stream that is inherently low in sulfur content. A fuel gas stream that is demonstrated to be low-sulfur is exempt from the monitoring requirements of 60.107a(a)(1) and (a)(2) until there are changes in operating conditions or stream composition.

a. The permittee shall submit to Toledo Division of Environmental Services a written application for an exemption from monitoring. The application must contain the following information:

i. A description of the fuel gas stream/system to be considered, including submission of a portion of the appropriate piping diagrams indicating the boundaries of the fuel gas stream/system, and the affected fuel gas combustion device(s) to be considered;

ii. A statement that there are no crossover or entry points for sour gas (high H_2S content) to be introduced into the fuel gas stream/system (this should be shown in the piping diagrams);

iii. An explanation of the conditions that ensure low amounts of sulfur in the fuel gas stream (i.e., control equipment or product specifications) at all times;

iv. The supporting test results from sampling the requested fuel gas stream/system demonstrating that the sulfur content is less than 5 ppm H_2S. Sampling data must include, at minimum, 2 weeks of daily monitoring (14 grab samples) for frequently operated fuel gas streams/systems; for infrequently operated fuel gas streams/systems, seven grab samples must be collected unless other additional information would support reduced sampling. The permittee shall use detector tubes ("length-of-stain tube" type measurement) following the "Gas Processors Association Standard 2377–86, Test for Hydrogen Sulfide and Carbon Dioxide in Natural Gas Using Length of Stain Tubes," 1986 Revision (incorporated by reference—see 60.17), with ranges 0–10/0–100 ppm (N = 10/1) to test the applicant fuel gas stream for H_2S; and

v. A description of how the 2 weeks (or seven samples for infrequently operated fuel gas streams/systems) of monitoring results compares to the typical range of H_2S concentration (fuel quality) expected for the fuel gas stream/system going to the affected fuel gas combustion device (e.g., the 2 weeks of daily detector tube results for a frequently operated loading rack included the entire range of products loaded out, and, therefore, should be representative of typical operating conditions affecting H_2S content in the fuel gas stream going to the loading rack flare).

b. The effective date of the exemption is the date of submission of the information required in 60.107a(b)(1).

c. No further action is required unless refinery operating conditions change in such a way that affects the exempt fuel gas stream/system (e.g., the stream composition changes). If such a change occurs, the permittee shall follow the procedures listed below.

i. If the operation change results in a sulfur content that is still within the range of concentrations included in the original application, the permittee shall conduct an H_2S test on a grab sample and record the results as proof that the concentration is still within the range.

ii. If the operation change results in a sulfur content that is outside the range of concentrations included in the original application, the permittee may submit new information following the procedures of paragraph (b)(1) of this section within 60 days (or within 30 days after the seventh grab sample is tested for infrequently operated process units).

iii. If the operation change results in a sulfur content that is outside the range of concentrations included in the original application, and the permittee chooses not to submit new information to support an exemption, the permittee must begin H_2S monitoring using daily stain sampling to demonstrate compliance. The permittee must begin monitoring according

to the requirements in paragraphs (a)(1) or (a)(2) of this section as soon as practicable but in no case later than 180 days after the operation change. During daily stain tube sampling, a daily sample exceeding 162 ppmv is an exceedance of the 3-hour H_2S concentration limit. The permittee must determine a rolling 365-day average using the stain sampling results; an average H_2S concentration of 5 ppmv must be used for days prior to the operation change.

(4) The permittee shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration (dry basis, 0 percent excess air) of NO_x emissions into the atmosphere. The monitor must include an O_2 monitor for correcting the data for excess air. [40 CFR 60.107a(c) and 60.13]

a. The permittee shall install, operate, and maintain each NO_x monitor according to Performance Specification 2 of appendix B to part 60. The span value of this NO_x monitor must be between 2 and 3 times the applicable emissions limit, inclusive. [40 CFR 60.107a(c)(1)]

b. The permittee shall conduct performance evaluations of each NO_x monitor according to the requirements in §60.13(c) and Performance Specification 2 of appendix B to part 60. The owner or operator shall use Methods 7, 7A, 7C, 7D, or 7E of appendix A–4 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10–1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 7 or 7C of appendix A–4 to part 60. [40 CFR 60.107a(c)(2)]

c. The permittee shall install, operate, and maintain each O_2 monitor according to Performance Specification 3 of appendix B to part 60. The span value of this O_2monitor must be selected between 10 and 25 percent, inclusive. [40 CFR 60.107a(c)(3)]

d. The permittee shall conduct performance evaluations of each O_2 monitor according to the requirements in §60.13(c) and Performance Specification 3 of appendix B to part 60. Method 3, 3A, or 3B of appendix A–2 to part 60 shall be used for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10–1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 3B of appendix A–2 to part 60. [40 CFR 60.107a(c)(4)]

e. The permittee shall comply with the quality assurance requirements in Procedure 1 of appendix F to part 60 for each NO_x and O_2 monitor, including quarterly accuracy determinations for NO_x monitors, annual accuracy determinations for O_2 monitors, and daily calibration drift tests. [40 CFR 60.107a(c)(5)]

(5) The permittee shall operate and maintain equipment to continuously monitor and record the actual fuel flow to this emissions unit when the emissions unit is in operation.

(6) The permittee shall measure and record the gross calorific value ("GCV") of the fuel being fired in this emissions unit on an hourly basis. The GCV shall be used in

conjunction with the records required in d(5) above to calculate and record the hourly heat input to the emissions unit.

(7) The permittee shall comply with the following requirements.

a. Each continuous hydrogen sulfide (H_2S) monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. At least 45 days before commencing certification testing of the continuous hydrogen sulfide monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of hydrogen sulfide emissions from the continuous monitor(s), in units of the applicable standard(s). 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 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

b. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

c. Prior to the performance test of the continuous hydrogen sulfide monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 7. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous hydrogen sulfide monitoring system meets the requirements of Performance Specification 7. Once received, the letter/document of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

d. The permittee shall operate and maintain equipment to continuously monitor and record hydrogen sulfide emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

i. at least one valid record of the emissions of hydrogen sulfide in parts per million (excluding system breakdowns, repairs, calibration checks, and zero and span adjustments) for each successive 15-minute period [40 CFR Part 60.7(f) and 40 CFR 60.13(e)(2)];

ii. emissions of hydrogen sulfide, in all units of the applicable standard(s) and in the appropriate averaging period;

iii. results of quarterly cylinder gas audits;

iv. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

v. of the applicable standard(s);

vi. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system, and control equipment;

vii. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous hydrogen sulfide monitoring system;

viii. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous hydrogen sulfide monitoring system; as well as,

ix. the reason (if known) and the corrective actions taken (if any) for each such event in vii. and viii.

(8) The permittee shall comply with the following requirements for the NO_x continuous Monitoring Systems.

a. Each continuous NO_x monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2. At least 45 days before commencing certification testing of the continuous NO_x monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of NO_x emissions from the continuous monitor(s), in units of the applicable standard(s). 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 NO_x monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60. [40 CFR 60.13 and Part 60, Appendix F]

b. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software. [40 CFR 60.2 and Part 60, Appendix F]

c. Prior to the performance test of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous NO_x monitoring system meets the requirements of Performance Specification~~s~~ 2. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software. [40 CFR 60.13 and Part 60, Appendix B]

d. The permittee shall install, operate, and maintain equipment to continuously monitor and record NO_x emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous NO_x monitoring system including, but not limited to:

i. At least one valid record of the emissions of NO_x in parts per million (excluding system breakdowns, repairs, calibration checks, and zero and span adjustments) for each successive 15-minute period [40 CFR 60.13(e)(2)];

ii. results of quarterly cylinder gas audits;

iii. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

iv. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

v. hours of operation of the emissions unit, continuous NO_x monitoring system, and control equipment;

vi. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO_x monitoring system;

vii. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NO_x monitoring system; as well as,

viii. the reason (if known) and the corrective actions taken (if any) for each such event in vi. and vii.

(9) The permittee shall calculate and maintain record of the rolling 12-month total NO_x, and SO_2 emission rates in units of tons per year in accordance with the procedures outlined in f) Testing Requirements.

(10) The permittee shall conduct a root cause analysis for each exceedance of an applicable short-term emissions limit in 60.102a(g)(1) if the SO2 discharge to the atmosphere is 227 kg (500 lb) greater than the amount that would have been emitted if the emissions limits had been met during one or more consecutive periods of excess emissions or any 24-hour period, whichever is shorter. For any root cause analysis performed, the owner or operator shall record the identification of the affected facility, the date and duration of the discharge, the results of the root cause analysis, and the action taken as a result of the root cause analysis. [40 CFR 60.103a(c)]

(11) For each fuel gas stream to which one of the exemptions listed in 60.107a(a)(3) applies, records of the specific exemption determined to apply for each fuel stream. If the permittee applies for the exemption described in §60.107a(a)(3)(iv), the permittee must keep a copy of the application as well as the letter from the Administrator granting approval of the application. [40 CFR 60.108a(c)(5)]

(12) The owner or operator shall record and maintain records of discharges greater than 500 lb SO_2 in excess of the allowable limits from any affected fuel gas combustion device. These records shall include:[40 CFR 60.108a(c)(6)]

a. A description of the discharge.

b. For discharges greater than 500 lb in excess of the allowable limits SO_2, the date and time the discharge was first identified and the duration of the discharge.

c. The measured or calculated cumulative quantity of gas discharged over the discharge duration. If the discharge duration exceeds 24 hours, record the discharge quantity for each 24-hour period. Engineering calculations are allowed for fuel gas combustion devices other than flares.

d. For discharges greater than 500 lb in excess of the allowable limits SO_2, the measured or estimated concentration of H_2S, TRS and SO_2 of the stream discharged. Process knowledge can be used to make these estimates for fuel gas combustion devices other than flares.

e. For discharges greater than 500 lb in excess of the allowable limits SO_2, the cumulative quantity of H_2S and SO_2 released into the atmosphere. For fuel gas combustion devices, assume 99 percent conversion of H_2S to SO_2.

f. Results of any root-cause analysis conducted as required in 60.103a(c).

(13) See 40 CFR Part 60, Subpart A.

(14) See 40 CFR Part 60, Subpart Ja.

(15) See 40 CFR Part 60, Appendix B.

(16) See 40 CFR Part 60, Appendix F.

(17) See 40 CFR Part 63, Subpart DDDDD

(18) The Permit to Install application for this emission unit, B036, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

   i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

   ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "**X**" hours per day and "**Y**" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4\ TLV/XY = MAGLC$$

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or worst case toxic contaminant(s):

Toxic Contaminant: **Hexane**

TLV (mg/m3): 175.9

Maximum Hourly Emission Rate (lbs/hr): 0.92

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.29

MAGLC (ug/m3): **4188**

The permittee, has demonstrated that emissions of hexane, from emissions unit(s) B036, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

(19) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final Permit to Install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level

concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

(20) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

(21) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas and/or natural gas was burned in this emissions unit. Each report shall be submitted to the Toledo Division of Environmental Services within 30 days after the deviation occurs.

(2) The permittee shall submit deviation (excursion) reports that identify each day when the NO_x, and/or SO_2 emission limitations specified under b)(1)a. were exceeded. The reports shall be submitted quarterly, by January 30, April 30, July 30, and October 30 of each year and shall cover the previous calendar quarters. These reports may be combined with the quarterly deviation reports submitted by the facility.

(3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall include the following:

i. the date, commencement and completion times, duration, and magnitude of each exceedance,

ii. the reason (if known) and the corrective actions taken (if any) for each exceedance.

iii. Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and

iv. A root-cause summary report that provides the information described in paragraph d)(11) of this section for all discharges for which a root-cause analysis was required by §60.103a(c)2.

v. For any periods for which monitoring data are not available, any changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

vi. A written statement, signed by a responsible official, certifying the accuracy and completeness of the information contained in the report.

Excess emissions shall be reported in units of the applicable standard(s).

b. the date, time, and duration of any/each malfunction** of the continuous hydrogen sulfide monitoring system, emissions unit, and/or control equipment; These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous monitoring system (CMS), including any change to the hardware, changes to the software that may affect CMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;

vii. unless previously submitted in the Quarterly Data Assessment Report (DAR), results and dates of quarterly cylinder gas audits;

viii. unless previously submitted in the Quarterly Data Assessment Report (DAR), results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

ix. unless previously submitted in the Quarterly Data Assessment Report (DAR), the results of any relative accuracy test audit showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;

x. total duration of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility;

xi. total duration of CMS downtime for the reporting period, and if the total period CMS downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime** of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation; and

xii. the reason (if known) and the corrective actions taken (if any) for each event in b.x. and xi.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* Where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** Each downtime event shall be reported regardless if there is an exceedance of any applicable limit

*** Downtime is time when the unit is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

(4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO_x emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall include the following:

i. the date, commencement and completion times, duration, and magnitude of each exceedance,

ii. the reason (if known) and the corrective actions taken (if any) for each exceedance.

iii. Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system; and

iv. For any periods for which monitoring data are not available, any changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

v. A written statement, signed by a responsible official, certifying the accuracy and completeness of the information contained in the report.

Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous NO_x and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total NO_x emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous NO_x monitoring system while the emissions unit was in operation;

viii. unless previously submitted in the Quarterly Data Assessment Report (DAR) results and date of quarterly cylinder gas audits;

ix. unless previously submitted in the Quarterly Data Assessment Report (DAR), results and date of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted in the Quarterly Data Assessment Report (DAR), the results of any relative accuracy test audit showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;

xi. total duration of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility;

xii. total duration of CMS downtime for the reporting period, and if the total period CMS downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime** of the continuous NO_x monitoring system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in b.xi. and xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime event shall be reported regardless if there is an exceedance of any applicable limit

*** Downtime is time when the unit is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

(5) This emissions unit is subject to the applicable provisions of Subpart Ja of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

(6) See 40 CFR Part 60, Subpart Ja.

(7) See 40 CFR Part 63, Subpart DDDDD.

(8) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the quarterly deviation (excursion) reports. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01], Option A, Engineering Guide #70

f) Testing Requirements

(1) Compliance with the emissions limitation(s) in b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

162 ppmv fuel gas H_2S, determined hourly on a 3-hour rolling average basis.

Applicable Compliance Method:

Ongoing compliance shall be demonstrated based upon the monitoring and record keeping requirements contained in the Monitoring and Record Keeping Section d) of this permit, and through demonstration of compliance with the quality assurance/ quality control plan, which shall meet the requirements of 40 CFR Part 60.

c. Emission Limitation:

60 ppmv fuel gas H_2S, determined daily on a 365 successive calendar day rolling average basis.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements of d).

d. Emission Limitation:

30.00 tons SO_2 per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be demonstrated as follows:

i. Add the monthly average H_2S concentration in the fuel gas plus 35 ppm sulfur to account for the non-H2S sulfur in fuel gas, based on testing at the refinery, or other more recent measured value to obtain the total sulfur concentration.
ii. Multiply the concentration of total sulfur by the molecular weight of SO_2, 64 lb SO_2/lbmol SO_2 and divide 379 MMSCF/lbmol gas conversion to obtain the lb SO_2/MMSCF emission factor.
iii. Multiply the SO_2 emission factor by the monthly total gas flow, divide by 2000 lb/ton and add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

*this calculation assumes that mole of total sulfur equals one mole of SO_2

e. Emission Limitation:

18.6 pounds per hour CO

Applicable Compliance Method:

Multiply the vendor provided emission factor of 0.0359 lb/mmBtu times the average daily fuel gas burned in mmscf/hr times the daily average heating value in Btu/scf.

If required, the permittee shall demonstrate compliance using Methods 1 through 4 and 10 of 40 CFR part 60, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

f. Emission Limitation:

81.61 tons CO per rolling, 12-month period

Applicable Compliance Method:

Compliance may be demonstrated by calculating annual emissions in tons based on the sum of the hourly emissions of CO over a 12-month rolling period.

g. Emission Limitation:

3.9 pounds per hour $PM_{10}/PM_{2.5}$ emissions

Applicable Compliance Method:

Multiply the AP-42 section 1.4 $PM_{10}/PM_{2.5}$ emission factor dated July 1998 of7.6 lb/mmscf of fuel gas burned times the daily average fuel gas burned per hour times the fuel gas heating value correction factor. The heating value correction factor is equal to the ratio of the daily average fuel gas heat content to the AP-42 natural gas heat content of 1020 Btu/scf. Initial compliance shall be demonstrated based upon the procedures specified in Other Test Method 27. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

h. Emission Limitation:

16.94 tons PM_{10} per rolling, 12-month period

Applicable Compliance Method:

Compliance may be demonstrated by calculating annual emissions in tons based on the sum of the hourly emissions of PM_{10} over a 12-month rolling period.

i. Emission Limitation:

0.045 lb/MMBtu NO_x on a daily, average basis

Applicable Compliance Method:

Compliance shall be demonstrated using records required in d)(8).

Compliance shall be demonstrated based upon the monitoring and record keeping requirements in Section d) of this permit.

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 7 or 7e.

j. Emission Limitation:

40 ppmv NO_x (dry basis, corrected to 0 percent excess air) on a 30-day rolling average basis

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements of d).

If required, compliance shall also be demonstrated based upon the methods and procedures outlined in 40 CFR 60.104a(i).

k. Emission Limitation:

79.56 tons NO_x per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be determined by multiplying the annual average emission factor of 0.035 lb/MMbtu for Ultra Low NO_x burners by the sum of the heat inputs in MMBtu (over a rolling 12-month period), and then dividing it by 2000.

l. Emission Limitation:

2.8 pound per hour VOC

Applicable Compliance Method:

Multiply the AP-42 section 1.4 VOC emission factor dated July 1998 of 5.5 lb/mmscf of fuel gas burned corrected for heating value by the daily average fuel gas burned. The heating value correction factor is equal to the ratio of the daily average fuel gas heat content to the AP-42 natural gas heat content of 1020 Btu/scf.

If required, the permittee shall demonstrate compliance using Methods 1 through 4 and 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

m. Emission Limitation:

12.28 tons VOC per rolling, 12-month period

Applicable Compliance Method:

Compliance may be demonstrated by calculating annual emissions based on the sum of the daily average hourly emissions of VOC over a 12-month rolling period.

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for NO_X, SO_2, PM_{10}, and $PM_{2.5}$.

c. The permittee shall determine compliance with the SO_2, NO_x, PM_{10}, and $PM_{2.5}$ emissions limits in 40 CFR 60.102a(g) for a fuel gas combustion device according to the following test methods and procedures:

i. Method 1 of appendix A–1 to part 60 for sample and velocity traverses;

ii. Method 2 of appendix A–1 to part 60 for velocity and volumetric flow rate;

iii. Method 3, 3A, or 3B of appendix A–2 to part 60 for gas analysis. The method ANSI/ASME PTC 19.10–1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 3B of appendix A–2 to part 60;

iv. Method 6, 6A, or 6C of appendix A–4 to part 60 to determine the SO_2 concentration. The method ANSI/ASME PTC 19.10–1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 6 or 6A of appendix A–4 to part 60.

(a) The performance test consists of 3 valid test runs; the duration of each test run must be no less than 1 hour.

(b) If a single fuel gas combustion device having a common source of fuel gas is monitored as allowed under §60.107a(a)(1)(v), only one performance test is required. That is, performance tests are not required when a new affected fuel gas combustion device is added to a common source of fuel gas that previously demonstrated compliance.

v. Method 7, 7A, 7C, 7D, or 7E of appendix A–4 to part 60 for moisture content and for the concentration of NO_x calculated as NO_2; the duration of each test run must be no less than 4 hours. The method ANSI/ASME PTC 19.10–1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 7 or 7C of appendix A–4 to part 60.

vi. Other Test Method 27 for PM_{10} and $PM_{2.5}$ emissions.

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

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to Toledo Division of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio.

g) Miscellaneous Requirements

(1) None.

7. P009, Sulfur Recovery Unit #1

Operations, Property and/or Equipment Description:

Sulfur Recovery Unit (SRU) 1, 120 long tons per day, with tail gas treatment unit and thermal oxidizer. Includes fugitive emissions from SRU #1 piping components and the SRU #1 acid gas flare (P051) for emergency upsets.

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(D)	See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(A)	See b)(2)f.
c.	OAC rule 3745-17-11(B)(1)	See b)(2)g.
d.	OAC rule 3745-18-54(W)(7)	See b)(2)h.
e.	OAC rule 3745-21-09(T)	See b)(2)i.
f.	40 CFR Part 60, Subpart J (40 CFR 60.100-109) [In accordance with 40 CFR 60.100(a) this emissions unit is a Claus sulfur recovery plant with a design capacity for sulfur feed of greater than 20 long tons per day that includes a fuel gas combustion device (incinerator) where construction commenced after 10/4/1976 and prior to 5/14/2007 and is subject to the emissions limitations/ control measures	See b)(2)c. through b)(2)e.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	specified in this section]	
g.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)k.
h.	40 CFR Part 63, Subpart A (40 CFR 60.1-16)	Table 6 to Subpart CC - General Provisions Applicability to Subpart CC, specifies which parts of the General Provisions in 40 CFR 63.1-16 apply. Table 44 to Subpart UUU of Part 63 — Applicability of NESHAP General Provisions to Subpart UUU shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
i.	40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657) [In accordance with 40 CFR 63.648(a) this emissions unit is a petroleum refinery process unit located at an existing major of hazardous air pollutants subject to the emissions limitations/control measure specified in this section.]	See b)(2)j.
j.	40 CFR Part 63, Subpart UUU (40 CFR 63.1560 – 63.1579) [In accordance with 40 CFR 63.1562, this emissions unit is a sulfur recovery plant with a Claus sulfur recovery unit and tail gas treatment unit, located at an existing major source of HAP emissions, that is subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2) and subject to the emission limitations/ control measures specified in this section.]	The SO_2 emission limitation specified by this rule is equivalent to that specified by 40 CFR Part 60, Subpart J under 40 CFR 60.104(a)(2)(i). [Table 29 to 40 CFR Part 63, Subpart UUU]

(2) Additional Terms and Conditions

a. This permit to install incorporates the emission limits and schedules set out in paragraphs 14-18 and 21 of the Consent Decree (United States of America, et al., v. BP Exploration& Oil Co., et al., Civil Action No. 2:96CF095 RL).

b. The permittee shall maintain all NSPS sulfur recovery pit emissions such that they are treated, monitored, and included as part of the sulfur recovery plant's emissions subject to the NSPS Subpart J limit for SO_2, 40 CFR 60.104(a)(2).

c. The permittee shall not burn in the tail gas incinerator any refinery fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf)(the equivalent concentration is 162 parts per million by volume of H_2S dry basis) as a volume-weighted, rolling 3-hour average concentration greater than 0.10 grain per dry standard cubic foot, except during periods of startup, shutdown or malfunction of the refinery fuel gas amine systems provided that the permittee shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. The monitoring, record keeping and reporting requirements for compliance with this condition is maintained under B032 of this permit.

d. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

e. The permittee shall not discharge or cause the discharge of any gases into the atmosphere from the Claus sulfur recovery plant containing in excess of 250 ppm SO_2 by volume (dry basis) at zero percent excess air as a rolling, 12-hour average. [§60.105(e)(4), §63.1568(a)(1)(i)]

f. 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 a mass emission limitation in OAC rule 3745-17-11.

g. The uncontrolled mass rate of particulate emissions (PE)* from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(17).

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

h. The emission limitation specified by OAC rule 3745-18-54(W)(7) is as stringent as the emission limitation specified by 40 CFR Part 60, Subpart J.

i. The permittee shall comply with the applicable leak detection and repair requirements specified in OAC rule 3745-21-09(T).

Consistent with the U.S. EPA streamlining policy, the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 63, Subpart CC for both equipment in organic HAP service and equipment not in organic HAP service. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T)

j. The permittee shall comply with the applicable leak detection and repair requirements specified in 40 CFR Part 63, Subpart CC.

k. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

l. The permittee shall maintain a written quality assurance/quality control plan for the continuous SO_2 monitoring system, designed to ensure continuous valid and representative readings of SO_2 emissions in units of the applicable standard(s). 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 SO_2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

m. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

c) Operational Restrictions

(1) See 40 CFR Part 60, Subpart J (40 CFR 60.100 – 60.109).

(2) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

(3) See 40 CFR Part 63, Subpart UUU (40 CFR 63.1560 – 63.1579).

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly install, operate and maintain a device to continuously monitor the presence of the flare pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. For each day the emissions unit is in operation, the permittee shall record all periods during which there was no flare pilot flame or the monitoring equipment was not operating.

(2) The permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of SO_2 emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air.

a. The span values for this monitor are 500 ppm SO_2 and 25 percent O_2.

b. The performance evaluations for this SO2 monitor under 40 CFR 60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations.

(3) The permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous SO_2 monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request. [40 CFR 60.13] and [40 CFR Part 60, Appendix B]

(4) The permittee shall operate and maintain equipment to continuously monitor and record SO_2 emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous SO_2 monitoring system including, but not limited to:

a. emissions of SO_2 in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f), ;

b. emissions of SO_2 in units of ppm SO_2 by volume (dry basis) at zero percent excess as a rolling, 12-hour average;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous SO_2 monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the continuous SO_2 monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO_2 monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in g. andh.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

(5) See 40 CFR Part 60, Subpart J (40 CFR 60.100 – 60.109).

(6) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

(7) See 40 CFR Part 63, Subpart UUU (40 CFR 63.1560 – 63.1579).

e) Reporting Requirements

(1) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO_2 monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO_2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by within 30 days following the end of each calendar quarter and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous SO_2 and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total SO_2 emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous SO_2 monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous SO_2 monitor out-of-control and the compliant results following any corrective actions;

xi. total duration of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility;

xii. total duration of CMS downtime for the reporting period, and if the total period CMS downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime** of the continuous SO_2 monitoring system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in b.xi. and xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime event shall be reported regardless if there is an exceedance of any applicable limit

*** Downtime is time when the unit is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

(2) See 40 CFR Part 60, Subpart J (40 CFR 60.100 – 60.109).

(3) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

(4) See 40 CFR Part 63, Subpart UUU (40 CFR 63.1560 – 63.1579).

(5) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

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

a. Emission Limitation:

The permittee shall not burn in the tail gas incinerator any refinery fuel gas that contains H_2S in excess of 230 mg/dscm (0.10 gr/dscf or 162 ppmvd) as a volume-weighted, rolling 3-hour average.

Applicable Compliance Method:

Ongoing compliance shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping section of Emissions Unit B032 of this permit, and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60. If required, compliance shall also be demonstrated based upon the methods and procedures of 40 CFR 60.106(e)(1).

b. Emission Limitation:

250 ppm SO_2 by volume (dry basis) at zero percent excess air as a rolling, 12-hour average

Applicable Compliance Method:

Ongoing compliance shall be demonstrated through the data collected as required in the Monitoring and Recordkeeping Section of this permit, 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 using the methods and procedures of 40 CFR 60.106(f).

(2) See 40 CFR Part 60, Subpart J (40 CFR 60.100 – 60.109).

(3) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

(4) See 40 CFR Part 63, Subpart UUU (40 CFR 63.1560 – 63.1579).

g) Miscellaneous Requirements

(1) None.

8. P011, Crude/Vac 1

Operations, Property and/or Equipment Description:

Distillation tower and vacuum distillation tower identified as Crude 1 and Vacuum 1 (also known as Crude Vac 1). Vapors extracted from Crude Vac 1 are ducted via the Crude 1 Overhead System directly to the refinery fuel gas system. All fugitive emissions from Crude Vac 1 are included with this emissions unit.

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.	ORC 3704.03(T) (Chapter 31 Modification, Best Available Technology (BAT) conditions)	10.09 tons per year volatile organic compound (VOC) emissions (from equipment leaks) See b)(2)h.
b.	OAC rule 3745-31-05(D) (PTI P0110958 issued 9/11/2012)	See b)(2)a.
c.	OAC rule 3745-18-54(W)(2)	The sulfur dioxide (SO_2) emissions from this emissions unit shall not exceed 0.40 pound per ton of actual process weight input. See b)(2)a.
d.	OAC rule 3745-21-09(M)(1)	See b)(2)b.
e.	OAC rule 3745-21-09(T)	See b)(2)c.
f.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)d.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a) [In accordance with 40 CFR 60.590a, this emissions unit is a process unit located at a petroleum refinery which has equipment (defined by 40 CFR 60.591a) that was added after 11/7/2006 and subject to the emissions limitations/control measures specified in this section]	See b)(2)e. [60.592(a)]
h.	40 CFR Part 63, Subpart A (40 CFR 60.1-16)	Table 6 to subpart CC specifies the provisions of subpart A of this part that apply and those that do not apply to owners and operators of sources subject to subpart CC. [63.642(c)]
i.	40 CFR Part 63, Subpart CC (40 CFR 60.640 - 63.679) [In accordance with 40 CFR 63.640, this emissions unit is a petroleum refining process unit located at an existing major source of HAP emissions subject to the emissions limitations/control measures specified in this section.]	See b)(2)f., b)(2)g. and b)(2)h. [63.640(d)(5)] [63.640(p)(2)]

(2) Additional Terms and Conditions

a. The SO_2 emission limitation specified by OAC rule 3745-18-54(W)(2) is less stringent than the emission limitation specified under 40 CFR 60.104. All refinery heaters and boilers burning refinery fuel gas are subject to the standards for sulfur oxides under 40 CFR 60.104 (NSPS Subpart J) or 40 CFR 60.102a(g)(1) (NSPS Subpart Ja) which restricts the permittee from burning in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis. Continuous compliance with this emission limitation is monitored by the

permittee's hydrogen sulfide continuous monitoring systems (CEMS). Monitoring, recordkeeping, reporting and testing requirements for the fuel gas CEMS are contained under specific emissions unit terms and conditions for fuel burning equipment.

NOTE: The refinery routes the Vacuum 1 offgas to the Crude 1 overhead drum and then directly to the refinery fuel gas system.

b. The permittee shall control the emissions of VOC from any vacuum producing systems (Vac 1) by piping the vapors to an appropriate firebox or incinerator, or by compressing the vapors and adding them to the refinery fuel gas system.

c. The permittee shall comply with the applicable requirements for equipment leaks specified in OAC rule 3745-21-09(T).

Consistent with the U.S. EPA streamlining policy, the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 60, Subpart GGGa for both equipment in organic HAP service and equipment not in organic HAP service. The MACT level monitoring of 40 CFR Part 60, Subpart GGGa is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).

d. 40 CFR Part 60 subpart A provides the applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

e. The permittee shall comply with the applicable requirements for equipment leaks specified in 40 CFR Part 60, Subpart GGGa beginning when the TFO project modifications that affect P011 are made. P011 is subject to the applicable requirements for equipment leaks specified in 40 CFR Part 60, Subpart GGG until the TFO project modifications that affect P011 are made.

f. Pursuant to 40 CFR 63.640(p)(2), equipment leaks that are subject to the provisions of 40 CFR 63 Subpart CC and 40 CFR Part 60, subpart GGGa, are required to comply only with the provisions specified in 40 CFR part 60, subpart GGGa.

g. When Vac 1 vent gas from this process is ducted to the refinery's fuel gas system, it is not part of the Subpart CC affected source per 63.640(d)(5). No testing, monitoring, record keeping, or reporting is required under this subpart for refinery fuel gas system or emission points routed to refinery fuel gas systems.

h. The annual VOC emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation

c) Operational Restrictions

(1) See 40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a).

(2) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

d) Monitoring and/or Recordkeeping Requirements

(1) See 40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a).

(2) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

e) Reporting Requirements

(1) See 40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a).

(2) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

f) Testing Requirements

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

a. Emission Limitation:

The SO_2 emissions from this emissions unit shall not exceed 0.40 pound per ton of actual process weight input.

Applicable Compliance Method:

Compliance with this emissions limitation is demonstrated by venting the process vapors produced at this emissions unit to the refinery fuel gas system where the hydrogen sulfide concentration of fuel gas is reduced to less than 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA-recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis or to the Crude 1 amine contactor where H2S concentration is reduced to less than 0.10 gr/dscf, and then to the firebox of the Crude 1 heater (B015).

b. Emission Limitation:

10.09 tons per year VOC emissions from equipment leaks

Applicable Compliance Method:

As long as compliance with the applicable leak monitoring and repair requirements of NSPS Subpart GGGa are maintained compliance with the with this emission limit above shall be demonstrated.

The emission limit of 10.09 tons per year VOC emissions from equipment leaks was established to reflect the potential to emit for this emissions unit using the

procedures specified in *Protocol for Equipment Leak Emission Estimates* (EPA document 453/R-95-017, subsequent updates to *Protocol for Equipment Leak Emission Estimates*, or alternative emission factor approved by Ohio EPA) to calculate the VOC emissions from equipment leaks. A summary of the calculations was submitted to Ohio EPA in Application for P0112686. Per permit condition 3(b)(2)(f), no ongoing compliance demonstration is required.

(2) See 40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a).

(3) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

g) Miscellaneous Requirements

(1) None.

9. P025, Refinery WWT System

Operations, Property and/or Equipment Description:

Facility-Wide Wastewater Treatment System: Process Oily Water System and stormwater system (including drains, manholes, junction boxes, lift stations, laterals and trunklines) within the refinery and refinery wastewater treatment system (excluding Belt Filter Presses P013 and P014) with the following treatment and control systems: carbon canisters and three benzene strippers with non-condensable vented to the Hydrocarbon Flare System (P003/ P004)

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.	ORC 3704.03(T) (Chapter 31 Modification) Best Available Technology (BAT) requirements	See b)(2)a.
b.	OAC rule 3745-21-09(M)(2)	See b)(2)b.
c.	OAC rule 3745-21-09(T)	See b)(2)c.
d.	OAC rule 3745-21-09(UU)(4)	See b)(2)d.
e.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units subject to 40 CFR 60. The definitions listed under 40 CFR 60.691 apply for all standards and requirements under 40 CFR Part 60, Subpart QQQ.
f.	40 CFR Part 60, Subpart GGGa	The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart GGGa upon the start-up of

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(40 CFR 60.590a-593a)	the proposed new benzene stripper for the piping components of the three benzene strippers in the process unit within P025 for the purpose of Subpart GGGa.
g.	40 CFR Part 60, Subpart QQQ (40 CFR 60.640-699) [In accordance with 40 CFR 60.690(a)(4), this emissions unit is an aggregate facility subject to the emission limitations/control measures specified in this section]	Group 2 wastewater streams that are managed in a piece of equipment subject to 40 CFR Part 60, Subpart QQQ, shall comply with the requirements of 40 CFR 60.692-1 to 60.692-5 and 40 CFR 60.693-1 and 60.693-2, except during periods of startup, shutdown or malfunction. A group 1 wastewater stream managed in a piece of equipment that is also subject to the provisions of 40 CFR Part 60, Subpart QQQ, is required to comply only with 40 CFR Part 63, Subpart CC. See b)(2)e.
h.	40 CFR Part 61, Subpart A (40 CFR 61.01-61.19)	40 CFR Part 61, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 61. The definitions listed in 40 CFR 61.341 apply for all the standards and requirements under 40 CFR Part 61, Subpart FF.
i.	40 CFR Part 61, Subpart FF (40 CFR 61.340-61.359) [In accordance with 40 CFR 61.340, this emission unit is a petroleum refinery subject to the emissions limitations/control measures specified in this section.]	Comply with all the applicable standards and requirements of 40 CFR Part 61, Subpart FF. See b)(2)e.
j.	40 CFR Part 63, Subpart A (40 CFR 63.1-63.16)	Table 6 of 40 CFR Part 63, Subpart CC specifies the provisions of 40 CFR Part 63, Subpart A, that apply and those do not apply to permittees of sources subject

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		to Subpart CC. [63.642(c)]
k.	40 CFR Part 63, Subpart CC (40 CFR 63.640-63.679) [In accordance with 40 CFR 63.641, this emission unit is a group 1 wastewater stream	Comply with the applicable wastewater provisions specified in 40 CFR 63.647 Comply with the applicable requirements of 40 CFR 63.640(p)(2). See b)(2)f.

(2) Additional Terms and Conditions

a. Compliance with the requirements of this rule includes compliance with the requirements of OAC rule 3745-21-09(M)(2), OAC rule 3745-21-09(T), OAC rule 3745-21-09(UU)(4), 40 CFR Part 60, Subpart QQQ, 40 CFR Part 61, Subpart FF, and 40 CFR Part 63, Subpart CC.

b. Except for any wastewater separator which is used solely for once-through, noncontact cooling water or for intermittent tank farm drainage resulting from accumulated precipitation, the permittee shall control the emissions of VOC from any wastewater separator by equipping all forebay sections and other separator sections with covers and seals which minimize the amount of oily water exposed to the ambient air. In addition, all covers and forebay and separator sections shall be equipped with lids and seals which are kept in a closed position at all times, except when in actual use. [OAC 3745-21-09(M)(2)]

c. The permittee shall comply with the applicable requirements for equipment leaks specified in OAC rule 3745-21-09(T).

Consistent with the U.S. EPA streamlining policy, the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 63, Subpart CC for both equipment in organic HAP service and equipment not in organic HAP service. The NSPS and MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).

Upon the start-up of the third benzene stripper, 40 CFR 60 Subpart GGGa shall apply to the benzene stripper portion of P025 only.

d. All process wastewater from the crude desalter shall be discharged to a steam stripper for the removal of condensable hydrocarbons, and all VOC emissions

from the steam stripper shall be vented to a flare that complies with the requirements of OAC 3745-21-09(DD)(10)(d). [OAC 3745-21-09(UU)(4)]

Consistent with the U.S. EPA streamlining policy, the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(DD)(10)(d) by demonstrating compliance with the flare requirements in 40 CFR Part 63, Subpart A. The MACT level monitoring of 40 CFR Part 63, is generally more stringent than the Ohio requirements of OAC rule 3745-21-09(DD)(10).

e. Individual drain systems and other affected equipment subject to 40 CFR Part 61, Subpart FF and 40 CFR Part 60, Subpart QQQ

TABLE 1 Affected Equipment Subject to 40 CFR Part 61, Subpart FF	
Affected Equipment Description	**Applicable Standard (Controls)**
Individual Drain Systems	**40 CFR 61.346**
Sump #1 (Junction Box JB-1)	[61.346 - Standards: Individual Drain Systems] (Carbon Canisters)
Sump #2 (Junction Box JB-2)	[61.346 - Standards: Individual Drain Systems] (Carbon Canisters)
Sump #6 (Junction Box JB-6)	[61.346 - Standards: Individual Drain Systems] (Carbon Canisters)
Reformer 3 Sump	[61.346 - Standards: Individual Drain Systems] (Carbon Canisters)
Drain at T089 (PR-500151) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T010 (PR-500152) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T011 (PR-500153) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T016 (PR-500154) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T017 (PR-500155) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T018 (PR-500156) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T019 (PR-500157) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T044 (PR-500158) to Sump #1	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T041 (PR-500130) to Sump #2	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T040 (PR-500131) to Sump #2	[61.346 - Standards: Individual Drain Systems] and Consent

TABLE 1 Affected Equipment Subject to 40 CFR Part 61, Subpart FF	
Affected Equipment Description	**Applicable Standard (Controls)**
	Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T120 (PR-500132) to Sump #2	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T084 (PR-500134) to Sump #2	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T085 (PR-500135) to Sump #2	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Drain at T035 (PR-500143) to Sump #2	[61.346 - Standards: Individual Drain Systems] and Consent Decree; (Waterdraw Sump Water Seal Inspection)
Unburied Sewer PP-1 (Blender Prefilter and Coalescer Drain Line to Sump #2)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-2 (Vac Truck Unloading Station #1 to Tanks T166 and T167)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-3 (Aboveground piping from Sump #1 to Benzene Decanter)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-4 (Aboveground piping from Sump #2 to PP-3)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-5 (Aboveground piping from Tank T166, Tank T167, and Sump #6 to Benzene Decanter)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-6 (Aboveground piping from Benzene Decanter to Tank T073)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-7 (Aboveground piping from Cat Poly Flare Gas Recovery Absorber Tower to Benzene Decanter)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-8 (Aboveground piping from Crude 1 Desalters to Benzene Decanter)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-9 (Aboveground piping from Crude 2 Desalters to PP-8)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-10 (Aboveground piping from Tank T073 to Benzene Decanter, HC Degasser, and Tanks T045 and T046)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-11 (Aboveground piping from Benzene Decanter to Tanks T166 and T167)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-12 (Aboveground piping from Tanks T166 and T167 to Benzene Strippers)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Unburied Sewer PP-13 (Aboveground piping	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)

TABLE 1 Affected Equipment Subject to 40 CFR Part 61, Subpart FF	
Affected Equipment Description	**Applicable Standard (Controls)**
from Reformer 3 Sump to Tanks T045 and T046)	
Unburied Sewer PP-14 (Unburied piping at QA/QC laboratory Tank PR-500901, Tank PR-500902, and vac truck loading station)	[61.346 - Standards: Individual Drain Systems] (Visual Inspection)
Tanks	**40 CFR 61.343**
T073 (PR-500084) – Slop Oil Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS Kb standards)
T163 (PR-500648) – Foul Condensate Storage Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS Kb standards)
T164 (PR-500295) – Foul Condensate Stripper Feed Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS Kb standards)
T166 (PR-500014) – Benzene Stripper Feed Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS Kb standards)
T167 (PR-500015) – Benzene Stripper Feed Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS Kb standards)
T170 (PR-500294) – Foul Condensate Stripper Feed Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS K standards)
T177 (PR-500757) – Foul Condensate Storage Tank	[40 CFR 61.351 - Alternative Standards for Tanks] (EFR in compliance with NSPS Kb standards)
Tank PR-500901 – QA/QC Lab Slop Tank #1	((3000-gallon fixed roof tank with closed vent system tied to carbon canister)
Tank PR-500902 – QA/QC Lab Slop Tank #2	(3000-gallon fixed roof tank with closed vent system tied to carbon canister)
Treatment Processes	**40 CFR 61.348**
Benzene Stripper #1	40 CFR 61.348 - Standards: Treatment Processes] (Closed vent system vented to the main hydrocarbon flare system (West Hydrocarbon Flare). If West Hydrocarbon Flare is taken out of service, the SRU #1 Acid Gas Flare is an approved back-up control device.)
Benzene Stripper #2	40 CFR 61.348 - Standards: Treatment Processes] (Closed vent system vented to the main hydrocarbon flare system (West Hydrocarbon Flare). If West Hydrocarbon Flare is taken out of service, the SRU #1 Acid Gas Flare is an approved back-up control device.)
Foul Condensate Stripper #1	40 CFR 61.341 – Definitions – *Sour Water Stream* and *Sour Water Stripper.*

TABLE 1 Affected Equipment Subject to 40 CFR Part 61, Subpart FF	
Affected Equipment Description	**Applicable Standard (Controls)**
Foul Condensate Stripper #2	40 CFR 61.341 – Definitions – *Sour Water Stream* and *Sour Water Stripper.*
Closed Vent Systems & Control Devices	**40 CFR 61.349**
Closed Vent System #1 CV-1 (Benzene Stripper Overhead Drums to West Hydrocarbon Flare)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Closed Vent System #2 CV-2 (Benzene Stripper Overhead Drums to SRU-1 Acid Gas Flare)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Closed Vent System #3 CV-3 (Sump #1 to Carbon Canisters)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Carbon Canisters at Sump #1 CC-3A, CC-3B	[61.349 - Standards: Closed Vent Systems and Control Devices] and Consent Decree; (Visual Inspection and Monitoring)
Closed Vent System #4 CV-4 (Sump #2 to Carbon Canisters)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Carbon Canisters at Sump #2 (CC-4A, CC-4B)	[61.349 - Standards: Closed Vent Systems and Control Devices] and Consent Decree; (Visual Inspection and Monitoring)
Closed Vent System #5 CV-5 (Sump #6 to Carbon Canisters)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Carbon Canisters at Sump #6	[61.349 - Standards: Closed Vent Systems and Control Devices] and Consent Decree; (Visual Inspection and Monitoring)
Closed Vent System #6 CV-6 (Heavy Cracked Degasser to West Hydrocarbon Flare)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
West Hydrocarbon Flare (P004)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Specifically 61.349 (a)(2)(iii), which references 40 CFR 60.18)
Closed Vent System #6 VC-6 (Reformer 3 Sump to Carbon Canisters)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Carbon Canisters at Reformer 3 Sump CC-7A, CC-7B)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Closed Vent System #7 CV-7 (QA/QC Lab Slop Tank PR-500901 to Carbon Canister)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Carbon Canister at Tank PR-500901 (CC-8)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Closed Vent System # 8 CV-8 (QA/QC Lab Slop Tank PR-500902 to Carbon Canister)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Carbon Canister at Tank PR-500902 (CC-9)	[61.349 - Standards: Closed Vent Systems and Control Devices] (Visual Inspection and Monitoring)
Closed Vent System CV-9 (Tank T164 and Tank	[61.349 – Standards: Closed Vent Systems and Control Devices}

TABLE 1 Affected Equipment Subject to 40 CFR Part 61, Subpart FF	
Affected Equipment Description	**Applicable Standard (Controls)**
T-170 to Acid Gas Fkare (P051)	(Visual Inspection and Monitoring)
SRU-1 Acid Gas Flare (P051)	[61.349 – Standards: Closed Vent Systems and Control Devices} (Visual Inspection and Monitoring)
Containers	**40 CFR 61.345**
Vacuum Trucks	[61.345 - Standards: Containers] (Visual Inspection and Monitoring)
Roll-off Boxes	[61.345 - Standards: Containers] (Visual Inspection and Monitoring)
Drums	[61.345 - Standards: Containers] (Visual Inspection and Monitoring)
Portable Tanks (FracTanks andBaker Boxes)	[61.345 - Standards: Containers] (Visual Inspection and Monitoring)

Note: The API Separators at the WWTU do not need to meet the requirements of 40 CFR 61.347 because the refinery complies with the 40 CFR 61.342(e) (6 Mg/yr option), not 40 CFR 61.342(c).

(a) Table 2, Individual Drain Systems Subject to 40 CFR Part 60, Subpart QQQ, Affected Equipment

TABLE 2 Individual Drain Systems Subject to 40 CFR Part 60, Subpart QQQ			
Emissions Unit ID	**Facility Description**	**Individual Drain System Description**	**Controls**
P009	New process sewer serving the SRU #1 Amine Acid Knockout Drum (PR-511893)	New individual drain system from Amine Acid Knockout Drum to Sewer 7	Water seals
P025	New sewer serving Tank T190 (PR-500218)	New individual drain system from Tank T190 dike drain valve to Sewer 7	Water seals
P025	Lift Station 001	Junction Box serving tanks T157, T159, and T161	Tight seal cover
P025	Lift station 175	Junction Box serving tanks T153, T154, T155, and T156	Tight seal cover
P025	Sewer 7	Trunk sewer draining process units P009, P036, and P037 to the 84-inch Sewer	Water seals
P025	84-inch Sewer	Trunk sewer draining the refinery process block, tank fields, and grounds to the WWTU	Water seals
P025	Masonry Sewer	Trunk sewer draining process units, including P028, P029,	Water seals

TABLE 2 Individual Drain Systems Subject to 40 CFR Part 60, Subpart QQQ			
Emissions Unit ID	**Facility Description**	**Individual Drain System Description**	**Controls**
		and P041, to the 84-inch Sewer	
P025	Tank 001-002-003 Trunk Sewer	Trunk sewer draining T157, T159, and T161 to the Masonry Sewer. (Lift Stations 001 and 757 are located on this trunk sewer.)	Water seals
P025	Tank 171-172-174-175 Trunk Sewer	Trunk sewer draining T153-156, to the 84-inch Sewer. (Lift Station 175 is located on this trunk sewer.)	Water seals
P025	New East Side 72-inch & 54-inch Sewer	New trunk sewer draining P803 to the 84-inch Sewer	Water seals and tight-covers
P025	Wastewater Treatment Unit (WWTU)	One 2-bay inlet channel, one primary API separator, 7 secondary API separators, and 2 lift stations	Inlet channel and API separators equipped with floating roof covers; lift stations equipped with tight seal covers and individual carbon canisters
P028	"A" Train Diesel Hydrotreater (ADHT)	New individual drain system serving the southern portion of the process unit and tied via a trunk sewer to the Masonry Sewer	Water seals
P029	"B" Train Gas Oil Hydrotreater (BGOT)	Drains in entire unit, including the BGOT Recycle Gas Compressor, to the Masonry sewer	Water seals
P034	Stormwater Diversion Chamber	Junction Box tied to tanks T168 and T169	Tight seal covers and 8 carbon canisters
P036	Coker 3	Drains in entire unit to Sewer 7	Water seals
P037	SRU #2 and #3	Drains in entire unit to Sewer 7	Water seals
P041	New process sewer in the Isocracker 2 (ISO 2) process unit serving the Hydrogen Make-Gas Compressor and East BGOT Reactor	New individual drain system draining Hydrogen Make-Gas Compressor and East BGOT Reactor to Masonry Sewer	Water seals
P803	Reformer 3	New individual drain system serving the entire process unit and tied to the new East Side 72-inch Sewer	Water seals

TABLE 2 Individual Drain Systems Subject to 40 CFR Part 60, Subpart QQQ			
Emissions Unit ID	**Facility Description**	**Individual Drain System Description**	**Controls**
P003	East Flare (Ja upgrade)	Drains tied to a new sewer connected to the new East Side 72-inch Sewer	Water seals and tight covers
P004	West Flare (Ja upgrade)	Drains tied to an existing upgraded sewer to Masonary Sewer	Water seals and tight covers
	New Flare Gas Recovery Compressors (Ja upgrade)	Drains tied tp upgraded BGOT Recycle Gas Cpmpressor Sewer to Masonary Sewer	Water seals and tight coverd
T145 (PR-500022)	Storage of petroleum liquids	Tank drain system	Dike valve
T148 (PR-500019)	Storage of petroleum liquids	Tank drain system	Dike valve
T149 (PR-500021)	Storage of petroleum liquids	Tank drain system	Dike valve
T151 (PR-500020)	Storage of petroleum liquids	Tank drain system	Dike valve
T153 (PR-500175)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T154 (PR-500174)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T155 (PR-500172)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T156 (PR-500171)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T157 (PR-500002)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T159 (PR-500001)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T161 (PR-500003)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T163 (PR-500648)	Storage of petroleum liquids	Tank drain system	Drain/dike valves
T164 (PR-500295)	Storage of petroleum liquids	Tank drain system	Water seals
T166 (PR-500014)	Wastewater Storage	Tank drain system	Drain/dike valve
T167 (PR-500015)	Wastewater Storage	Tank drain system	Drain/dike valve
T168 (PR-500026)	Wastewater Storage	Tank drain system	Tight seal covers and 2 carbon canisters
T169 (PR-500027)	Wastewater Storage	Tank drain system	Tight seal covers and 2 carbon canisters
T187 (PR-500818)	Storage of petroleum liquids	Tank drain system	Drain/dike valve
T188 (PR-500819)	Storage of petroleum liquids	Tank drain system	Drain/dike valve
T190 (PR-500218)	Storage of petroleum liquids	Tank drain system	Water sealsDrain/dike valve

f. Pursuant to 40 CFR 63.640(p)(2), equipment leaks subject to the requirements of 40 CFR 63 Subpart CC and 40 CFR 60 Subpart GGGa, need only comply with

the requirements of 40 CFR 60 Subpart GGGa for the benzene stripper portion of P025 only.

c) Operational Restrictions

(1) See 40 CFR Part 63, Subpart CC (40 CFR 63.640-657).

(2) See 40 CFR Part 61, Subpart FF (40 CFR 61.340-359).

(3) See 40 CFR Part 60, Subpart QQQ (40 CFR 60.690-699).

(4) See 40 CFR Part 60, Subpart GGGa (40 CFR 60.590a-593a).

d) Monitoring and/or Recordkeeping Requirements

(1) See 40 CFR Part 63, Subpart CC (40 CFR 63.640-657).

(2) See 40 CFR Part 61, Subpart FF (40 CFR 61.340-359).

Carbon Canisters Monitoring for 40 CFR 61 Subpart FF compliance. The permittee shall comply with either section d)(3)a. or d)(3)b. below at all locations where a carbon canister(s) is utilized as the control device under the Benzene Waste NESHAP (40 CFR 61.354(d)).

a. Utilizing primary and secondary carbon canisters in series:

i. The permittee shall monitor for breakthrough between the primary and secondary carbon canisters at times when there is actual flow to the carbon canister, in accordance with the frequency specified in 40 CFR 61.354(d) The permittee shall replace the secondary carbon canisters with fresh carbon canisters immediately when VOC breakthrough of 50 ppm is detected. The original secondary carbon canister or a new carbon canister will be used as the new primary carbon canister. For this section, "immediately" means within twenty-four (24) hours.

ii. The permittee shall maintain a supply of fresh carbon canisters at each facility at all times.

iii. Until installation of the second carbon canister all monitoring shall be conducted as specified in

b. Utilizing single carbon canisters:

i. The permittee shall monitor for breakthrough from the carbon canisters at times when there is actual flow to the carbon canister, in accordance with the frequency specified in 40 CFR 61.354(d)

ii. For the single canister option, canisters will be replaced immediately when breakthrough is determined as follows:

(a) For canisters less than or equal to 55 gallon drum size, breakthrough is any reading of VOC above background. The permittee currently monitors these weekly to determine breakthrough;

(b) For canisters larger than 55 gallons, breakthrough is defined as either:

(i) 50 ppm VOC; or

(ii) 1 ppm benzene. To use 1 ppm benzene, canisters must be monitored for VOC. When a reading of 10 ppm VOC is detected, monitoring for benzene must be conducted on the following schedule:

Daily if the historical replacement interval is two weeks or less, or Monday, Wednesday and Friday, if the historical replacement interval is greater than two weeks.

iii. For purposes of section d)(3).b, the term "immediately" shall be defined to mean: within eight (8) hours for canisters with historical replacement intervals of two weeks or less; or within twenty-four (24) hours for canisters with a historical replacement interval of more than two weeks.

iv. The permittee shall maintain a supply of fresh carbon canisters at each facility at all times.

v. Single carbon canisters can be replaced with a dual system at any time provided US EPA is notified and single canister monitoring is continued until the second canister is installed.

(3) Records for sections d)(3)a. and d)(3)b. shall be maintained in accordance with 40 CFR 61.356(j)(10) for carbon adsorbers not regenerated directly on site

(4) Monitoring requirement for OAC rule 3745-21-09.

a. Except for any wastewater separator which is used solely for once-through, noncontact cooling water or for intermittent tank farm drainage resulting from accumulated precipitation, the permittee shall check all separator covers and forebay and separator sections by visual inspections quarterly to ensure that they are equipped with lids and seals that are kept in a closed position at all times except when in actual use.

[OAC rule 3745-21-09(M)(2)

b. The permittee shall collect and record the following information each day: the operating times for the Benzene wastewater stripper system including piping from the decanter, Tanks 14 & 15 to the Benzene strippers and the piping system to the West flare, and the crude desalters. At times when the hydrocarbon flare

is out of service for maintenance or repair, the permittee will vent to the SRU 1 Acid Gas Flare.

[OAC rule 3745-21-09(UU)(4)

(5) See 40 CFR Part 60, Subpart QQQ (40 CFR 60.690-699).

(6) See 40 CFR Part 60 Subpart GGGa (40 CFR 60.590a-593a)

e) Reporting Requirements

(1) See 40 CFR Part 63, Subpart CC (40 CFR 63.640-657).

(2) See 40 CFR Part 61, Subpart FF (40 CFR 61.340-359).

(3) See 40 CFR Part 60, Subpart QQQ (40 CFR 60.690-699).

(4) See 40 CFR Part 60, Subpart GGGa (40 CFR 60.590a-593a).

(5) Deviation Reporting Requirements for OAC rule 3745-21-09(M)(2)
The permittee shall submit quarterly deviation (excursion) reports that identify the following: Except for any wastewater separator which is used solely for once-through, noncontact cooling water or for intermittent tank farm drainage resulting from accumulated precipitation, the permittee shall submit deviation (excursion reports) that identify all occurrences where covers, forebay and other separator sections were not equipped with lids, seals, or kept in a closed position except when in actual use. The quarterly reports shall be submitted, electronically through Ohio EPA Air services, within 30 days of the end of the quarter. If no deviations occurred during the quarter the permittee shall submit a statement that no deviations occurred during the calendar quarter.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

(6) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

(1) See 40 CFR Part 63, Subpart CC(40 CFR 63.640-657).

(2) See 40 CFR Part 61, Subpart FF(40 CFR 61.340-359).

(3) See 40 CFR Part 60, Subpart QQQ (40 CFR 60.690-699)

(4) See 40 CFR Part 60, Subpart GGGa.

g) Miscellaneous Requirements

(1) None.

10. P028, "A" Train Diesel Hydrotreater

Operations, Property and/or Equipment Description:

"A" Train Diesel Hydrotreater. All fugitive emissions from ADHT are included with this emissions unit. This unit has a Group 1 Miscellaneous Process vent control by the Hydrocarbon Flares.

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.	ORC 3704.03(T) (Chapter 31 Modification) Best Available Technology (BAT) requirements	22.03 tons per year volatile organic compound (VOC) emissions (from equipment leaks). See b)(2)f.
b.	OAC rule 3745-21-09(T)	See b)(2)a.
c.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)d.
d.	40 CFR Part 60, Subpart GGG (40 CFR 60.590 – 60.593) [In accordance with 40 CFR 60.590(a), this emissions unit is a process unit located at a petroleum refinery which has equipment defined by 40 CFR 60.591, andsubject to the emissions limitations/control measures specified in this section]	See b)(2)c.
e.	40 CFR Part 63, Subpart A	Table 6 of 40 CFR Part 63, Subpart CC specifies the provisions of 40 CFR Part 63, Subpart A, that apply and those do

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(40 CFR 60.1-16)	not apply to permittees of sources subject to Subpart CC. [63.642(d)]
f.	40 CFR Part 63, Subpart CC (40 CFR 60.640 - 63.657) [In accordance with 40 CFR 63.640, this emissions unit is a petroleum refining process unit located at an existing major source of HAP emissions subject to the emissions limitations/control measures specified in this section.]	See b)(2)b. and b)(2)c. [63.640(p)(1)].

(2) Additional Terms and Conditions

a. The permittee shall comply with applicable requirements for equipment leaks specified in OAC rule 3745-21-09(T).

Consistent with the U.S. EPA streamlining policy, the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 63, Subpart CC for both equipment in organic HAP service and equipment not in organic HAP service. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).

b. The permittee shall comply with the applicable leak detection and repair requirements specified in 40 CFR Part 63, Subpart CC

c. Pursuant to 40 CFR 63.640(p)(1), equipment leaks that are subject to the provisions of both 40 CFR Part 60, Subpart GGG and 40 CFR Part 63, Subpart CC are required to comply only with the provisions specified in 40 CFR Part 63, Subpart CC. See 40 CFR 63.640(p).

d. 40 CFR Part 60 subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

e. The flare shall meet the requirements of 40 CFR 63.11(b), as required for a flare that controls Group 1 Miscellaneous Process vents per 40 CFR 63 Subpart CC.

f. The annual VOC emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to

develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation

c) Operational Restrictions

(1) See 40 CFR Part 60, Subpart GGG (40 CFR 60.590a – 60.593a).

(2) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

d) Monitoring and/or Recordkeeping Requirements

(1) See 40 CFR Part 60, Subpart GGG (40 CFR 60.590a – 60.593a).

(2) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

e) Reporting Requirements

(1) See 40 CFR Part 60, Subpart GGG (40 CFR 60.590a – 60.593a.

(2) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

f) Testing Requirements

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

a. Emission Limitation:

22.03 tons per year VOC emissions, from equipment leaks

Applicable Compliance Method:

As long as compliance with the applicable leak monitoring and repair requirements of the refinery's LDAR program is maintained, compliance with the emission limitation above shall be demonstrated.

The emission limit of 22.03 tons per year VOC emissions from equipment leaks was established to reflect the potential to emit for this emissions unit using the procedures specified in *Protocol for Equipment Leak Emission Estimates* (EPA document 453/R-95-017, subsequent updates to *Protocol for Equipment Leak Emission Estimates*, or alternative emission factor approved by Ohio EPA) to calculate the VOC emissions from equipment leaks. A summary of the calculations was submitted to Ohio EPA in Application for P0112686.

Per permit condition 3(b)(2)(f), no ongoing compliance demonstration is required.

(2) See 40 CFR Part 60, Subpart GGG (40 CFR 60.590a – 60.593a).

(3) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

g) Miscellaneous Requirements

(1) None.

11. P036, Coker 3

Operations, Property and/or Equipment Description:

Coker 3/ delayed petroleum coker, which processes the heaviest of the Vacuum units' streams and further recovers valuable gas oils, distillates and produces fuel gas and petroleum coke. The coker drum is vented to the refining process during the coking cycle. The drum is subsequently depressured through a coker blowdown drum that is shared with Coker 2 (P017) to the flare gas recovery system. After blowdown drum pressure reaches flare header pressure, the blowdown drum is vented to the atmosphere. The coke is then cut out of the depressured process drum while the other drum is filled.

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)	13.85 tons of VOC per rolling 12-month period (from coke cutting) 10.81 tons of VOC from fugitive emissions (equipment leaks) per rolling 12-month period See b)(2)f, c)(1), and c)(2)
b.	OAC rule 3745-21-09(T)	See b)(2)a.
c.	40 CFR Part 60, Subpart A (40 CFR 60.1 – 60.19)	See b)(2)b.
e.	40 CFR Part 60, Subpart GGG (40 CFR 60.590 – 60.593)	See b)(2)c.
f.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 63.16)	Table 6 to Subpart CC of 40 CFR Part 63 — General Provisions Applicability to Subpart CC shows which parts of the General Provisions of 40 CFR 60.1 -16

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		apply. [63.642(c)]
g.	40 CFR Part 63, Subpart CC (40 CFR 63.640 -63.679) [In accordance with 40 CFR 63.640, this emissions unit is a petroleum refining process unit located at an existing major source of HAP emissions subject to the emissions limitations/control measures specified in this section.]	See b)(2)d. and b)(2)e. (40 CFR 63.640(p)(2))

(2) Additional Terms and Conditions

a. The permittee shall comply with all the applicable requirements of OAC rule 3745-21-09(T). Consistent with the U.S. EPA streamlining policy, the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 63, Subpart CC for both equipment in organic HAP service and equipment not in organic HAP service. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).

b. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

c. Equipment leaks that are subject to the provisions of both 40 CFR Part 60, Subpart GGG and 40 CFR Part 63, Subpart CC are required to comply only with the provisions specified in 40 CFR Part 63, Subpart CC.

d. The permittee shall comply with all applicable equipment leak terms and conditions for 40 CFR Part 63, Subpart CC, which reference 40 CFR Part 60, Subpart VV.

e. The coker blowdown vent shall comply with the applicable requirements for the miscellaneous process vent provisions of 40 CFR Part 63, Subpart CC.

f. The annual VOC emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to

develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

c) Operational Restrictions

(1) The permittee shall vent the coker blowdown emission to the refinery flare gas recovery system.

(2) See 40 CFR Part 63, Subpart CC (40 CFR 63.640 – 60.657)

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain records of emissions occurring during any malfunction, bypassing control equipment, startup or shutdown period must be quantified and recorded.

(2) The permittee shall maintain records of all periods when the blowdown emissions from this emissions unit were not vented to the flare gas recovery system.

(3) The permittee shall record the number of coking cycles each month.

(4) See 40 CFR Part 60, Subpart GGG (40 CFR 60.590a – 60.593a).

(5) See 40 CFR Part 63, Subpart CC(40 CFR 63.640 -63.657).

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports of the following:

a. All periods when:

i. emissions from coke cutting exceeded 13.85 tons of VOC per rolling 12-month period;

ii. the blowdown emissions were not vented to the flare gas recovery system.

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 quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

(2) See 40 CFR Part 60, Subpart GGG (40 CFR 60.590a – 60.593a).

(3) See 40 CFR Part 63, Subpart CC (40 CFR 63.640 -63.657).

(4) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

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

a. VOC emissions from coke cutting shall not exceed 13.85 tons per year of VOC per rolling, 12-month period

Applicable Compliance Method:

Compliance shall be determined by multiplying the VOC emission factor of 44.28 pounds VOC per blowdown cycle by the number of blowdown cycles per month to obtain the monthly total VOC emissions, add this value to the total for the previous 11 months to obtain the 12-month total VOC emissions (in pounds), and divide by 2000 lbs/ton.

If required, the permittee shall conduct testing of the emissions unit to determine the coke cutting emissions factor, and submit the results of that testing to Ohio EPA. Upon approval by the Director, the new emission factor shall be used for purposes of demonstrating compliance with the specified emission limit.

b. Emission Limitation:

10.81 tons per year of VOC as a rolling, 12-month summation from fugitive equipment leaks

Applicable Compliance Method:

As long as compliance with the applicable leak monitoring and repair requirements of 40 CFR 63 Subpart CC are maintained compliance with this emission limit above shall be demonstrated.

If required, compliance shall be determined by using the procedures specified in Protocol for Equipment Leak Emission Estimates (EPA document 453/R-95-017, subsequent updates to Protocol for Equipment Leak Emission Estimates, or alternative emission factor approved by Ohio EPA).

(2) See 40 CFR Part 60, Subpart GGG (40 CFR 60.590a – 60.593a).

(3) See 40 CFR Part 63, Subpart CC (40 CFR 63.640 -63.657).

g) Miscellaneous Requirements

(1) None.

12. P037, Sulfur Recovery Unit #2 and #3

Operations, Property and/or Equipment Description:

Sulfur Recovery Unit #2 and #3 with common tail gas treater, sulfur pits, and thermal oxidizer. Includes fugitive emissions from SRU #2 & 3 piping components and the TRP acid gas flare (P050) for emergency upsets

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) (PTI 04-1046 as modified on August 5, 1998)	Carbon monoxide (CO) emissions shall not exceed 2.7 lbs/hr and 8.07 tons per rolling, 12-month period. Nitrogen oxides (NO_x) emissions shall not exceed 4.4 lbs/hr and 12.76 tons per rolling, 12-month period. Particulate matter emissions less than or equal to 10 microns in diameter (PM10) shall not exceed 0.6 lb/hr and 1.74 tons per rolling, 12-month period; Sulfur dioxide (SO_2) emissions from this emissions unit shall not exceed 172 tons per rolling, 12-month period. Fugitive volatile organic compound (VOC) emissions from equipment leaks shall not exceed 6.2 tons per year (from fugitive equipment leaks) See b)(2)a. and b)(2)m.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(D)	See b)(2)b.
c.	OAC rule 3745-07-07(A)(1)	See b)(2)c.
d.	OAC rule 3745-17-11(B)(1)	See b)(2)d.
e.	OAC rule 3745-18-06(E)(2)	See b)(2)l.
f.	OAC rule 3745-21-09(T)	See b)(2)e.
g.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)f.
h.	40 CFR Part 60, Subpart J (40 CFR 60.100-109) [In accordance with 40 CFR 60.100(a)(1) this emissions unit is a Claus sulfur recovery plant with a design capacity for sulfur feed of greater than 20 long tons per day that includes a fuel gas combustion device (incinerator) where construction commenced after 10/4/1976 and prior to 5/14/2007 and is subject to the emissions limitations/ control measures specified in this section]	See b)(2)g. and h. [60.104(a)]
i.	40 CFR Part 60, Subpart GGG (40 CFR 60.590 - 593) [In accordance with 40 CFR 63.640(p) equipment leaks that are also subject to the provisions of 40 CFR 60 and 61 are required to comply with the requirements of 40 CFR Part 63, Subpart CC.]	See b)(2)i. [60.592]
j.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	Table 6 to Subpart CC — General Provisions Applicability to Subpart CC, specifies which parts of the General Provisions in 40 CFR 63.1-16 apply.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Table 44 – Applicability of NESHAP General Provisions to Subpart UUU shows which part of the General Provisions in 40 CFR 63.1-16 apply. [40 CFR 63.642(c) and 63.1577]
k.	40 CFR Part 63, Subpart CC (40 CFR 640 - 679) [In accordance with 40 CFR 63.648(a) this emissions unit is a petroleum refinery process unit located at an existing major of hazardous air pollutants subject to the emissions limitations/control measure specified in this section.]	see b)(2)j. [63.648]
l.	40 CFR Part 63, Subpart UUU (40 CFR 63.1560-1579) [In accordance with 40 CFR 63.1562, this emissions unit is a sulfur recovery plant with a Claus sulfur recovery unit and tail gas treatment unit, located at an existing major source of HAP emissions, that is subject to the NSPS for sulfur oxides in 40 CFR 60.104(a)(2) and subject to the emission limitations/ control measures specified in this section.]	The SO_2 emission limitation specified by this rule is equivalent to that specified by 40 CFR Part 60, Subpart J under 40 CFR 60.104(a)(2)(i). [Table 29 to 40 CFR Part 63, Subpart UUU]

(2) Additional Terms and Conditions

a. The requirements of this rule also include compliance with OAC rule 3745-21-09(T), 40 CFR Part 60, Subpart GGG, and 40 CFR 60 Subpart J.

b. This permit to install incorporates the emission limits and schedules set out in paragraphs 14-18 and 21 of the Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL).

The permittee shall re-route all NSPS sulfur recovery plant sulfur pit emissions such that they are treated, monitored, and included as part of the sulfur recovery plant's emissions subject to the NSPS Subpart J limit for SO_2, 40 CFR 60.104(a)(2), by no later than the first turnaround of the Claus train that occurs after July 18, 2001.

c. 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 a mass emission limitation in OAC rule 3745-17-11.

d. The uncontrolled mass rate of particulate emissions (PE)* from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(17).

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

e. The permittee shall comply with the applicable leak detection and repair requirements specified in OAC rule 3745-21-09(T).

Consistent with the U.S. EPA streamlining policy, the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 63, Subpart CC for both equipment in organic HAP service and equipment not in organic HAP service. The MACT level monitoring of 40 CFR Part 63, Subpart CC is generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).

f. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

g. The permittee shall not burn in the tail gas incinerator or any refinery fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf)(the equivalent concentration is 162 parts per million by volume of H_2S dry basis) as a volume-weighted, rolling 3-hour average concentration greater than 0.10 grain per dry standard cubic foot, except during periods of startup, shutdown or malfunction of the refinery fuel gas amine systems provided that the permittee shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. The monitoring, record keeping, and reporting requirements for these requirements are maintained under B032 of this permit.

h. The permittee shall not discharge or cause the discharge of any gases into the atmosphere from the Claus sulfur recovery plant containing in excess of 250 ppm SO_2 by volume (dry basis) at zero percent excess as a rolling, 12-hour average. [§60.105(e)(4), §63.1568(a)(1)(i)]

i. Pursuant to 40 CFR 63.640(p)(1) equipment leaks that are also subject to the provisions of 40 CFR part 60 Subpart GGG, are required to comply only with the provisions specified in 40 CFR 63 Subpart CC

j. The permittee shall comply with the applicable leak detection and repair requirements specified in 40 CFR Part 63, subpart CC.

k. The permittee shall maintain a written quality assurance/quality control plan for the continuous SO_2 monitoring system, designed to ensure continuous valid and representative readings of SO_2 emissions in units of the applicable standard(s). 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 SO_2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

l. The emission limitation specified by OAC rule 3745-18-06(E)(2) is less stringent than the limitation specified by 40 CFR Part 60, Subpart J.

m. The annual VOC emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

c) Operational Restrictions

(1) A pilot flame shall be maintained at all times in the TRP Acid Gas flare's (P050) pilot light burner.

(2) See 40 CFR Part 60, Subpart J (40 CFR 60.100-109).

(3) See 40 CFR Part 63, Subpart CC (40 CFR 60.640-679).

(4) See 40 CFR Part 63, Subpart UUU (40 CFR 63.1560-1579).

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall monitor and record the monthly average volumetric firing rate in the Thermal Oxidizer in units of standard cubic feet per month. From these data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total CO, NO_x and PM10 emission rates in units of tons in accordance with the procedure outlined in section f).

(2) The permittee shall properly install, operate and maintain a device to continuously monitor the presence of the flare pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. For each day the emissions unit is in operation, the permittee shall record all periods during which there was no flare pilot flame or the monitoring equipment was not operating.

(3) The permittee shall operate and maintain an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of SO_2 emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air.

a. The span values for this monitor are 500 ppm SO_2 and 25 percent O_2.

b. The performance evaluations for this SO_2 monitor under 40 CFR 60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations.

(4) The permittee shall maintain on-site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous SO_2 monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. The letter(s)/document(s) of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(5) The permittee shall operate and maintain equipment to continuously monitor and record SO_2 emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous SO_2 monitoring system including, but not limited to:

a. emissions of SO_2 in parts per million measured and recorded pursuant to 40 CFR Part 60.7;

b. emissions of SO_2 in lb/hr, and in ppmvd @ 0% O_2, as a rolling 12-hour average, and tons SO_2 per rolling 12-month period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. operation of the emissions unit and of the SO_2 monitoring system;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO_2 monitoring system downtime (calculated pursuant to 40 CFR Part 60.7)

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or continuous SO_2 monitoring system downtime (calculated pursuant to 40 CFR Part 60.7); as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event ing. andh above.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

(6) The permittee shall monitor and record the monthly average stack oxygen content, fuel gas burned in the thermal oxidizer rate, and tail gas treater vent gas rate, and determine the monthly total gas flow. In addition, the permittee shall calculate and record the monthly average SO_2 concentration in the SRU stack from the data recorded by the continuous emission monitor. From these data, the permittee shall calculate and record the monthly total SO_2 emissions for that month and the 12-month, rolling summation of the monthly emissions in accordance with the procedures specified in f).

(7) Emissions occurring during any malfunction, bypassing, startup or shutdown period shall be quantified and recorded.

(8) See 40 CFR Part 60, Subpart J (40 CFR 60.100-109).

(9) See 40 CFR Part 63, Subpart CC (40 CFR 60.640-679).

(10) See 40 CFR Part 63, Subpart UUU (40 CFR 63.1560-1579).

e) Reporting Requirements

(1) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO_2 monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO_2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by within 30 days following the end of each calendar quarter and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous SO_2 and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total SO_2 emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous SO_2 monitoring system while the emissions unit was in operation;

viii. results and dates of quarterly cylinder gas audits;

ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous SO_2 monitor out-of-control and the compliant results following any corrective actions;

xi. total duration of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility;

xii. total duration of CMS downtime for the reporting period, and if the total period CMS downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime** of the continuous SO_2 monitoring system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in b.xi. and xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime event shall be reported regardless if there is an exceedance of any applicable limit

*** Downtime is time when the unit is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

[40 CFR 60.7]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify each period when emissions exceeded any of the following emissions limitations:

a. 8.07 tons CO per rolling, 12-month period;

b. 12.76 tons NO_x per rolling, 12-month period; and

c. 1.74 tons PM_{10} per rolling, 12-month period.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit.

(3) See 40 CFR Part 60, Subpart J (40 CFR 60.100-109).

(4) See 40 CFR Part 63, Subpart CC (40 CFR 60.640-679).

(5) See 40 CFR Part 63, Subpart UUU (40 CFR 63.1560-1579).

(6) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

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

a. Emission Limitation:

CO emissions shall not exceed 2.7 pounds per hour.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the actual heat input to the thermal oxidizer (mmBtu/hr) by the CO emission factor from AP-42 Table 1.4-1

dated 7/98 (84 lb/mmscf) divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf).

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 thru 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

b. Emission Limitation:

CO emissions shall not exceed 8.07 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the actual firing rate of the thermal oxidizer per rolling, 12-month period (mmscf) by the CO emission factor from AP-42 Table 1.4-1 dated 7/98 (84 lb/mmscf), and dividing by 2,000 pounds per ton.

c. Emission Limitation:

NO_x emissions shall not exceed 4.4 lbs/hr

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the heat input to the thermal oxidizer (mmBtu/hr) by the manufacturer's guaranteed low-NO_x burner emission factor of 0.10 lb/mmBtu.

If required, Methods 1 through 4 and Method 7E of 40 CFR Part 60, Appendix A shall be used to demonstrate compliance. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitation:

NO_x emissions shall not exceed 12.76 tons per rolling, 12-month period

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the firing rate to the thermal oxidizer (mmBtu/hr) by the NO_x emission manufacturer’s emission factor (0.10 lb/mmBtu), multiplying by the maximum annual operating hours (8,760 hours), and divided by 2,000 pounds per ton.

e. Emission Limitation:

PM_{10} emissions shall not exceed 0.6 lb/hr

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the heat input to the thermal oxidizer (mmBtu/hr) by the PM_{10} emission factor from AP-42 Table 1.4-2 dated 7/98 (7.6 lb/mmscf), and dividing by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf).

If required, Methods 201 and 202 of 40 CFR Part 51, Appendix M shall be used to demonstrate compliance. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

f. Emission Limitation:

PM_{10} emissions shall not exceed 1.74 tons per rolling, 12-month period

Applicable Compliance Method:

Compliance may be demonstrated by multiplying the heat input to the thermal oxidizer (mmBtu/hr) by the PM_{10} emission factor from AP-42 Table 1.4-2 dated 7/98 (7.6 lb/mmscf), divided by the average heating value for natural gas specified in AP-42 Table 1.4-1 dated 7/98 (1,020 Btu/scf), multiplying by the maximum annual operating hours (8,760 hrs/yr), and dividing by 2,000 pounds per ton.

g. Emission Limitation:

250 ppm by volume (dry basis) of sulfur dioxide (SO_2) at zero percent excess air

Applicable Compliance Method: The monitoring and recordkeeping requirements of d) shall be used to demonstrate compliance. If required, the procedures outlined under 40 CFR 60.106(f) shall be used to demonstrate compliance.

h. Emission Limitation:

6.2 tons per year VOC emissions (from fugitive equipment leaks)

Applicable Compliance Method:

Compliance with this emissions limit is demonstrated by compliance with the applicable leak monitoring and repair requirements of NSPS Subpart GGG.

The emission limit of 6.2 tons per year VOC emissions from equipment leaks was established to reflect the potential to emit for this emissions unit using the procedures specified in Protocol for Equipment Leak Emission Estimates (EPA document 453/R-95-017, subsequent updates to Protocol for Equipment Leak Emission Estimates, or alternative emission factor approved by Ohio EPA) to calculate the VOC emissions from equipment leaks. Per condition b)2)(o), no ongoing compliance demonstration is required.

i. Emission Limitation:

SO_2 emissions from this emissions unit shall not exceed 172 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with this emissions limitation shall be demonstrated by using the monthly emissions of SO_2 from this emissions unit, calculated by multiplying the calculated total flue gas volume (scf/yr) corrected to 0% O_2 by the SO_2 density at 60 F(0.1733 lb SO_2/ft^3 SO_2) multiplied by a temperature correction factor of (560R/ 520R) to correct the SO_2 density to the standard temperature of the SO_2 CEMS (100^oF) then multiplied by the monthly average concentration of SO_2 in the flue gas (ppmv) as measured by the CEMS, divided by $1E^{06}$, and divided by 2,000 pounds per ton. Add the SO_2 emissions from the current month to the total SO_2 emissions for the previous 11 months to determine the tons of SO_2 emitted per rolling, 12-month period from this emissions unit.

(2) Ongoing compliance with the SO_2 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 Section of this permit; 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.

(3) See 40 CFR Part 60, Subpart J (40 CFR 60.100-109).

(4) See 40 CFR Part 63, Subpart CC (40 CFR 60.640-679).

(5) See 40 CFR Part 63, Subpart UUU (40 CFR 63.1560 – 1579).

g) Miscellaneous Requirements

(1) None.

13. P068, Coker Gas Plant

Operations, Property and/or Equipment Description:

Coker Gas Plant - consists of the Coker Wet Gas Absorber Stripper System, Coker Depentanizer system, and Coker Polishing Amine Contactor System. Treats Wet Gas from the Cokers to remove sulfur from the fuel gas

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) June 30, 2008	2.62 tons per year volatile organic compound (VOC) emissions (from equipment leaks) See b)(2)f., b)(2)g., b)(2)h., and b)(2)i.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	See b)(2)j.
c.	OAC rule 3745-21-09(T)	See b)(2)a.
d.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)b.
e.	40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a) [In accordance with 40 CFR 60.590a, this emissions unit is a process unit located at a petroleum refinery which has equipment (defined by 40 CFR 60.591a) that was added after 11/7/2006 and subject to the emissions	The permittee shall comply with applicable requirements for equipment leaks specified in 40 CFR Part 60, Subpart GGGa. [60.592(a)]

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	limitations/control measures specified in this section]	
f.	40 CFR Part 63, Subpart A (40 CFR 60.1-16)	Table 6 to subpart CC specifies the provisions of subpart A of this part that apply and those that do not apply to owners and operators of sources subject to subpart CC. [63.642(c)]
g.	40 CFR Part 63, Subpart CC (40 CFR 60.640 - 63.679) [In accordance with 40 CFR 63.640, this emissions unit is a petroleum refining process unit located at an existing major source of HAP emissions subject to the emissions limitations/control measures specified in this section.]	See b)(2)d. and b)(2)e. [63.640(d)(5)] [63.640(p)(2)]
h.	40 CFR Part 60, Subpart NNN (40 CFR 60.660 – 60.668) [In accordance with 40 CFR 60.660, this emissions unit includes an absorber/stripper and debutanizer distillation process that produces chemicals listed in 40 CFR 60.667 (propane and butane)]	See b)(2)f. [60.662]

(2) Additional Terms and Conditions

a. The permittee shall comply with applicable requirements for equipment leaks specified in OAC rule 3745-21-09(T).

Consistent with the U.S. EPA streamlining policy, the permittee may elect to demonstrate compliance with OAC rule 3745-21-09(T) by demonstrating compliance with the equipment leak standards in 40 CFR Part 60, Subpart GGGa for both equipment in organic HAP service and equipment not in organic HAP service. The MACT level monitoring of 40 CFR Part 60, Subpart GGGa is

generally more stringent than the LDAR requirements of OAC rule 3745-21-09(T).

b. 40 CFR Part 60 subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.

c. The permittee shall comply with applicable requirements for equipment leaks specified in 40 CFR Part 60, Subpart GGGa.

d. Pursuant to 40 CFR 63.640(p)(2), equipment leaks that are subject to the provisions of both 40 CFR Part 60, Subpart GGGa and 40 CFR Part 63, Subpart CC are required to comply only with the provisions specified in 40 CFR Part 60, Subpart GGGa.

e. Vapors from this process are ducted to the refinery's fuel gas system and therefore are not part of the Subpart CC affected source per 63.640(d)(5). No testing, monitoring, recordkeeping, or reporting is required under this subpart for refinery fuel gas system or emission points routed to refinery fuel gas systems.

f. The permittee shall comply with the requirements in 40 CFR Part 60, Subpart NNN as they apply to the vent from the Coker Gas Plant unless US EPA approves alternative requirements. The permittee has indicated that a request to use an alternative monitoring plan will be submitted to U.S. EPA for the Coker Gas Plant.

g. Compliance with the requirements of this rule includes compliance with the requirements of OAC rule 3745-21-09(T), and 40 CFR Part 60, Subpart GGGa.

h. The annual emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

i. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administration Code (OAC) paragraph 3745-31-05(A)(3)(ii) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).

[OAC rule 3745-31-05(A)(3)]

j. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(ii) (the less than 10 tons per year BAT exemption)

[OAC rule 3745-31-05(A)(3)(ii)]

c) Operational Restrictions

(1) See 40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a).

(2) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

(3) See 40 CFR Part 60 Subpart NNN

d) Monitoring and/or Recordkeeping Requirements

(1) See 40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a).

(2) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

(3) See 40 CFR Part 60 Subpart NNN

e) Reporting Requirements

(1) See 40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a).

(2) See 40 CFR Part 63, Subpart CC (40 CFR 63.640 – 63.657).

(3) See 40 CFR Part 60, Subpart NNN

f) Testing Requirements

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

a. Emission Limitation:

2.62 tons per year VOC emissions from equipment leaks

Applicable Compliance Method:

As long as compliance with the applicable leak monitoring and repair requirements of NSPS Subpart GGGa is maintained, compliance with the emission limitation above shall be demonstrated.

The emission limit of 2.62 tons per year VOC emissions from equipment leaks was established to reflect the potential to emit for this emissions unit using the procedures specified in Protocol for Equipment Leak Emission Estimates (EPA document 453/R-95-017, subsequent updates to Protocol for Equipment Leak Emission Estimates, or alternative emission factor approved by Ohio EPA) to calculate the VOC emissions from equipment leaks. A summary of the calculations was submitted to Ohio EPA in Application for P0112686. Per condition b)(2)f., no ongoing compliance demonstration is required.

(2) See 40 CFR Part 60, Subpart GGGa (40 CFR 60.590a – 60.593a)a.

(3) See 40 CFR Part 63, Subpart CC (40 CFR 60.640 – 63.657).

(4) See 40 CFR 60 Subpart NNN

g) Miscellaneous Requirements

(1) None.

14. Emissions Unit Group -Alstom Boilers: B034,B035,

EU ID	Operations, Property and/or Equipment Description
B034	East Alston Boiler - 353 mmBtu/hr (HHV rated) heater fired with refinery fuel gas and/or natural gas with ultra low NOx burners
B035	West Alston Boiler - 353 mmBtu/hr (HHV rated) heater fired with refinery fuel gas and/or natural gas with ultra low NOx burners

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) d)(16)

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 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.
b.	OAC rule 3745-17-10(B)	See b)(2)b.
c.	OAC rule 3745-18-54(W)(1)	See b)(2)b.
d.	OAC rule 3745-31-05(A)(3) (PTI P0106444 issued 1/23/2012)	Carbon monoxide (CO) emissions from each unit shall not exceed 38.48 pounds per hour and 168.53 tons per rolling, 12-month period. Nitrogen oxides (NOx) emissions from each unit shall not exceed 12.71 pounds per hour. PM_{10} emissions from each unit shall not exceed 2.63 pound per hour and 11.52 tons per rolling, 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Sulfur dioxide (SO_2) emissions shall not exceed the rate specified in b)(2)a. Volatile organic compounds (VOC) emissions from each unit shall not exceed 1.90 pound per hour and 8.34 ton perrolling, 12-month period. Sulfuric acid mist (H_2SO_4) emissions from each unit shall not exceed 1.01 ton per rolling, 12 month period. See b)(2)a, c., and d
e.	OAC rule 3745-31-05(D)	See b)(2)e.
f.	40 CFR Part 60, Subpart Db	0.10 pound of NO_x (expressed as NO_2) per mmBtu heat input See b)(2)g.
g.	40 CFR Part 60, Subpart J	See b)(2)d.
h.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 63.7575) [In accordance with 40 CFR 63.7575, this emissions unit is an existing industrial boiler or process heater in the “units designed to burn gas 1 fuels” subcategory, located at a major source of HAP emissions and subject to the applicable emissions limitations/control requirements specified in this section.]	See b)(2)f.
i.	40 CFR Part 60, Subpart A	See b)(2)h. and i.
j.	OAC rule 3745-109	See b)(2)j.
k.	40 CFR Part 75	See b)(2)k.

(2) Additional Terms and Conditions

a. Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), the combined emissions of B034 and B035 shall comply with the sulfur dioxide (SO_2) emissions limit of 34.7 tons SO_2 per rolling 12-months and demonstrate compliance using the monitoring, record keeping and reporting requirements of Section B.9.a) through 9.c) of this permit. Prior to the completion of construction and initial shakedown of the Coker Gas Plant (P068), combined emissions of B034 and B035 shall comply with the sulfur dioxide (SO_2) emissions limit of 22.0 tons per rolling 12-months and demonstrate compliance as specified in f)(1)d. of this permit.

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart J.

d. The permittee shall not burn in this emissions unit any refinery fuel gas that has a volume-weighted, rolling, 3-hour average H_2S concentration greater than 230 milligrams per dry standard cubic meter (0.10 grain per dry standard cubic foot) or a rolling 3-hour average SO_2 concentration of 20 parts per million by volume, dry basis, adjusted to 0% excess air, depending on which monitoring system is chosen.

[40 CFR 60.104(a)(1)]

e. The combined CO, NO_x, $PM_{10,}$ VOC and H_2SO_4 emissions from B034 and B035 shall not respectively exceed 205.29, 38.5, 14.03, 16.67 and 1.59 tons per rolling 12-month period.

f. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A). This emissions unit is required to comply with the applicable periodic tune-up and one-time energy assessment requirements specified in Table 3 to this Subpart no later than January 31, 2016.

g. The permittee shall comply with all applicable requirements of 40 CFR Part 60, Subpart Db.

h. The permittee shall comply with all applicable requirements of 40 CFR Part 60, Subpart A and 40 CFR Part 63, Subpart A.

i. Within 180 days of the effective date of this permit, the permittee shall develop and maintain a written quality assurance/quality control plan for the continuous NO_x monitoring system, designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard(s). Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60,

Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct relative accuracy test audits for the continuous NO_x monitoring system in accordance with the frequencies required pursuant to 40 CFR Part 60 and 40 CFR Part 75; or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B, in lieu of frequencies required in 40 CFR Part 60. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits pursuant to 40 CFR Part 60, and linearity checks pursuant to 40 CFR Part 75; however, linearity checks completed pursuant to 40 CFR Part 75, Appendix B, may be substituted for the quarterly cylinder gas or relative accuracy audits required per 40 CFR Part 60.

j. The permittee shall ensure that any emissions unit(s) subject to the Clean Air Interstate Rule (CAIR) complies/comply with the requirements of the Ohio Administrative Code (OAC) Chapter 3745-109, which includes submitting timely permit applications.

[Authority for term: OAC rule 3745-77-07(A)(5)]

k. The non-power generating (non-EGU) requirements of 40 CFR Part 75 are applicable to this unit.

c) Operational Restrictions

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

(2) The combined heat input to two boilers (B034 and B035) shall be limited to a maximum firing rate of 3,766,800 mmBtu/yr based on a rolling, 12-month summation of the monthly firing rate.

(3) The permittee shall operate and maintain equipment to continuously monitor and record the NOx emissions from this emissions unit when combusting natural gas and/or refinery fuel gas.

(4) [40 CFR 63.7500(a) – Table 3]

A new or existing boiler or process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the process heater as specified in 40 CFR 63.7540. Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

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, quantity, and heating value in Btu/dscf of the fuel burned.

(2) The permittee shall calibrate, maintain and operate a continuous monitoring system for measurement of the H_2S content in the fuel gas before being burned in this fuel gas combustion device or a continuous monitoring system for measuring the SO_2 and O_2 concentrations in the stack.

a. The H_2S monitoring device shall continuously monitor and record the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device. The SO_2 monitoring device shall continuously monitor and record the concentration (dry basis) of the SO_2 and O_2 content of the stack gas before it is exhausted to the atmosphere.

b. The span value for this instrument is 425 mg/dscm H_2S or 50 ppm SO_2 and 10% oxygen.

c. 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_2S in the fuel gas being burned.

d. The performance evaluations for this H_2S monitor shall use Performance Specification 7. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations. Performance evaluations for an SO_2 monitor shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations.

(3) The permittee must automatically check the zero (or low level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span must, as a minimum, be adjusted whenever either the 24-hour zero drift or the 24-hour span drift exceeds two times the limit of the applicable performance specification in appendix B of 40 CFR Part 60. The system must allow the amount of the excess zero and span drift to be recorded and quantified whenever specified.

(4) Monitors that automatically adjust the data to the corrected calibration values (e.g., microprocessor control) must be programmed to record the unadjusted concentration measured in the calibration drift (CD) prior to resetting the calibration, if performed, or record the amount of adjustment.

(5) If either the zero (or low-level) or high-level CD result exceeds twice the applicable drift specification in Appendix B of 40 CFR part 60 for five, consecutive, daily periods, the CEMS is out-of-control. If either the zero (or low-level) or high-level CD result exceeds four times the applicable drift specification in 40 CFR Part 60, Appendix B during any CD check, the CEMS is out-of-control. If the CEMS is out-of-control, take necessary corrective action. Following corrective action, repeat the CD checks.

(6) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required in 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows: the continuous monitoring system for measuring emissions shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15- minute period.

(7) One-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non-reduced form (e.g., ppm pollutant and percent O_2 or ng/J of pollutant). All excess emissions shall be converted into units of the standard. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit.

(8) The permittee must implement a quality control program. As a minimum, each quality control program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities:

a. Calibration of CEMS.

b. CD determination and adjustment of CEMS.

c. Preventive maintenance of CEMS (including spare parts inventory).

d. Data recording, calculations, and reporting.

e. Accuracy audit procedures including sampling and analysis methods.

f. Program of corrective action for malfunctioning CEMS.

As described in Section 5.2 of 40 CFR Part 60, Appendix F Procedure 1, whenever excessive inaccuracies occur for two consecutive quarters, the source permittee must revise the current written procedures or modify or replace the CEMS to correct the deficiency causing the excessive inaccuracies.

(9) The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports, and records.

(10) The permittee shall monitor and record the daily and monthly average firing rate in terms of standard cubic feet per hour, mmBtu/hr, and mmBtu/month for this emission unit. Each month, the permittee shall add the monthly firing total rate to the total firing rate for the previous 11 months to determine the rolling, 12-month summation of the monthly

firing rate. Also during the first 12 calendar months of operation, the permittee shall record the cumulative firing rate for each calendar month.

(11) The permittee shall monitor and record the daily and monthly average firing rate in terms of standard cubic feet per hour, mmBtu/hr and mmBtu/month for B034 and B035 combined. Each month, the permittee shall add the monthly total firing rate to the total firing rate for the previous 11 months to determine the rolling, 12 month summation of the monthly firing rate. Also during the first 12 calendar months of operation, the permittee shall record the cumulative firing rate for each calendar month.

(12) Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specifications 2 for approval by the Ohio EPA, Central Office.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

(13) The permittee shall install, operate, and maintain equipment to continuously monitor and record NO_x emissions from this emissions unit in units of the applicable standard(s). As stated under 40 CFR 60.48b(b)(2), this monitoring system may be used to determine the compliance of 40 CFR 60.48b except that the permittee shall also meet the requirements of 60.49b. The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Parts 60 and Part 75, if applicable.

The permittee shall maintain records of data obtained by the continuous NO_x monitoring system including, but not limited to:

a. emissions of NO_x in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

b. emissions of NO_x in pounds per hour, pounds per million Btu, and in units of the applicable standard(s) over the appropriate averaging period;

c. results of quarterly cylinder gas audits or linearity checks if applicable;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous NO_x monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO_x monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NO_x monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

j. All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

(14) The permittee shall maintain records of the following information for each steam generating unit operating day:

a. Calendar date;

b. The 30-day average NO_X emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

c. Identification of the steam generating unit operating days when the calculated 30-day average NO_X emission rates are in excess of the NO_X emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

d. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

e. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

f. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;

g. Identification of the times when the pollutant concentration exceeded full span of the CEMS;

h. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

i. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(15) The permittee shall maintain records of the monthly CO, NO_x, PM_{10}, SO_2, and VOC emissions from each emissions unit and from B034 and B035 combined. Each month the permittee shall add the monthly CO, NO_x, PM_{10}, SO_2, and VOC emissions total to the

total for the previous 11 months to determine the rolling, 12-month summation of emissions from each emissions unit and B034 and B035 combined.

(16) The permit to install for the emissions units (B034) and (B035) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s) for the each emissions unit:

Pollutant: Hexane

TLV (mg/m3): 180

Maximum Hourly Emission Rate (lbs/hr): 1.27

Predicted 1-Hour Maximum Ground-Level

Concentration (ug/m3): 1.47

MAGLC (ug/m3): 4286

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

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

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

d. description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

e. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

f. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas and/or natural gas was burned in this emissions unit. Each report shall be submitted to the Toledo Division of Environmental Services within 30 days after the deviation occurs.

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

a. each period in which the firing rates for B034 and B35 identified in Section c)(2) were exceeded;

b. each period in which combined CO emission limitation under b((1)e. was exceeded;

c. each period in which combined NO_x emission limitation under b)(1)e. was exceeded;

d. each period in which combined PM_{10} emission limitation under b((1)e. was exceeded;

e. each period in which combined SO_2 emission limitation under b)(1)e. was exceeded; and,

f. each period in which combined VOC emission limitation under b)(1)e. was exceeded;

The quarterly deviation (excursion) reports may be submitted in accordance with the reporting requirements of the Standard Terms and Conditions (Section A) of this permit

(3) The permittee shall submit an H_2S or SO_2 excess emissions and monitoring systems performance report and/or a summary report form to the Toledo Division of Environmental Services quarterly, or except when the Administrator of USEPA, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the emissions unit. All reports shall be postmarked by the 30th day following the end of each three-month period. Excess emissions are each rolling 3-hour average H_2S concentration greater than 0.10 grain per dry standard cubic foot of fuel gas burned or a rolling 3-hour average SO_2 concentration of 20 ppmv, dry basis, adjusted to 0% excess air. Written reports of excess emissions shall include the following information:

a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

d. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(4) The summary report form shall contain the information and be in the format shown in Figure 1 of 40 CFR 60.7 unless otherwise specified by the Administrator of USEPA. One summary report form shall be submitted for each pollutant monitored at each affected facility.

a. If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator of USEPA.

b. If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

(5) The permittee shall submit a quarterly report for each CEMS containing the accuracy results from Section 6 and the CD assessment results from Section 4 of 40 CFR Part 60, Appendix F Procedure 1. Report the drift and accuracy information as a Data

Assessment Report (DAR), and include one copy of this DAR for each quarterly audit with the report of emissions required under the applicable subparts of this part. As a minimum, the DAR must contain the following information:

a. Permittee name and address.

b. Identification and location of monitors in the CEMS.

c. Manufacturer and model number of each monitor in the CEMS.

d. Assessment of CEMS data accuracy and date of assessment as determined by a Relative Accuracy Test Audit (RATA), Relative Accuracy Audit (RAA), or Cylinder Gas Audit (CGA) described in Section 5 of 40 CFR Part 60, Appendix F Procedure 1 including the relative accuracy for the RATA, the Accuracy (A) for the RAA or CGA, the Reference Method (RM) results, the cylinder gases certified values, the CEMS responses, and the calculations results as defined in Section 6 of 40 CFR Part 60, Appendix F Procedure 1. If the accuracy audit results show the CEMS to be out-of-control, the CEMS operator shall report both the audit results showing the CEMS to be out-of-control and the results of the audit following corrective action showing the CEMS to be operating within specifications.

e. Results from USEPA performance audit samples described in Section 5 of 40 CFR Part 60, Appendix F Procedure 1 and the applicable RM's.

f. Summary of all corrective actions taken when CEMS was determined out-of-control, as described in Sections 4 and 5 of 40 CFR Part 60, Appendix F Procedure 1.

An example of a DAR format is shown in Figure 1 of 40 CFR Part 60, Appendix F Procedure 1.

(6) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the Toledo Division of Environmental Services, documenting all instances of NO_x emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous NO_x and other associated monitors;

iii. the location of the continuous NO_x monitor;

iv. the exceedance report as detailed in (a) above;

v. the total NO_x emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous NO_x monitoring system while the emissions unit was in operation;

viii. results and date of quarterly cylinder gas audits or linearity checks if applicable;

ix. results and date of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. the results of any relative accuracy test audit showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;

xi. total duration of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility ;

xii. total duration of CMS downtime for the reporting period, and if the total period CMS downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime* of the continuous NO_x monitoring system and/or control equipment while the emissions unit was in operation; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in b.xi. andb.xii.

*Each report shall address the operations conducted and data obtained during the previous calendar quarter. Data substitution procedures from 40 CFR 75 are not to be used for showing compliance with the short term OAC 3745-31-05(A)(3) rule-based or NSPS-based limitation(s) in this permit.

**each downtime event shall be reported regardless if there is an exceedance of any applicable limit

*** Downtime is time when the unit is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

(7) This emissions unit is subject to the applicable provisions of Subparts Db and J of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to the 40 CFR Part 60.7, the permittee is hereby advised of the requirement to report the following at the appropriate times:

a. Construction date (no later than 30 days after such date);

b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

c. Actual start-up date (within 15 days after such date); and

d. Date of performance testing (if required, at least 30 days prior to testing).

(8) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

(1) Compliance with the emissions limitation(s) in b)(1) shall be determined in accordance with the following methods:

a. Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

0.10 grain H_2S per dry standard cubic foot of fuel gas burned as a volume-weighted, rolling, 3-hour average or 20 parts per million SO_2, in the stack gas, as a volume weighted dry basis, adjusted to 0% excess air, rolling, 3-hour average

Applicable Compliance Method:

Ongoing compliance shall be demonstrated based upon the data collected through the monitoring and record keeping requirements of d), and through

demonstration of compliance with the quality assurance/ quality control plan, which shall meet the requirements of 40 CFR Part 60.

c. Emission Limitation:

34.7 tons per rolling, 12-month period of SO_2 from B034 and B035 combined.

Applicable Compliance Method:

After the completion of the construction and the initial shakedown of the Coker Gas Plant (P068), this limit will be effective. Compliance shall be based on the following:

i. Multiply the monthly average total sulfur concentration recorded in Section B.9 by the molecular weight of SO_2 (64 lb/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in units of lb/MMSCF

ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and

iii. Add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

iv. Sum the emissions for B034 and B035 SO_2.

*this formula assumes that 1 mole of total sulfur converts to 1 mole of SO_2

d. Emission Limitation:

22 tons per rolling, 12-month period of SO_2 from B034 and B035 combined.

Applicable Compliance Method:

This limit applies only prior to the start-up of the Coker Gas Plant (P068). Compliance shall be based on the following:

i. Multiply the monthly average H_2S concentration by the molecular weight of SO_2 (64 lb/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in units of lb/MMSCF

ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and

iii. Add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.

*this formula assumes that 1 mole of H2S converts to 1 mole of SO_2

After the completion and construction and the initial shakedown of the Coker Gas Plant (P068), this limit will no longer be in effect, and the limit in f)(1)c. above, will be in effect.

e. Emission Limitation:

38.48 pounds per hour CO

Applicable Compliance Method:

Multiply the vendor supplied emission factor of 0.109 lb/mmBtu times the maximum firing rate (353 mmBtu/hr). If required, the permittee shall demonstrate compliance using Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

f. Emission Limitation:

168.53 tons per rolling, 12-month period CO

Applicable Compliance Method:

Annual allowable emissions are based on operation at maximum capacity for 8760 hours per year. Compliance with the hourly CO limit constitutes compliance with the annual CO limit.

g. Emission Limitation

205.29 tons per rolling, 12 month period combined CO emissions from B034 and B035

Applicable Compliance Method:

The monitoring and record keeping requirements under d)(11) and d)(15) shall serve as demonstration of compliance with this emission limitation.

h. Emission Limitation:

2.63 pound per hour PM_{10} emissions

Applicable Compliance Method:

Multiply the AP-42 section 1.4 particulate matter emission factor dated July 1998 of 7.6 lb/mmcf of fuel gas burned times the daily average fuel gas burned per hour times the fuel gas heating value correction factor. The heating value correction factor is equal to the ratio of the actual fuel gas heat content to the AP-42 heat content of 1020 Btu/scf. If required, compliance shall be demonstrated based upon the procedures specified in Methods 201 and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

i. Emission Limitation:

11.52 tons per rolling, 12-month period of PM_{10} emissions

Applicable Compliance Method:

Annual allowable emissions are based on operation at maximum capacity for 8760 hours per year. Compliance with the hourly particulate emission limit constitutes compliance with the annual particulate emission limit.

j. Emission Limitation

14.03 tons per rolling, 12 month period combined PM_{10} emissions from B034 and B035

Applicable Compliance Method:

The monitoring and record keeping requirements under d)(11) and d)(16) shall serve as demonstration of compliance with this emission limitation.

k. Emission Limitation:

12.71 pound per hour NO_x

Applicable Compliance Method:

Prior to the certification of the NO_x CEMS, multiply the NO_x emission factor of 0.036 lb/mmBtu based on the RACT/BACT/LAER Clearinghouse database survey in the original BAT analysis in the original application by the daily average fuel gas burned per hour to determine the hourly NO_x emissions. After the certification of the NO_x CEMS, the NO_x CEMS shall be used to demonstrate compliance.

If required, the permittee shall demonstrate compliance using methods 1 through 4 and 7 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved methods may be used with prior approval from Ohio EPA.

l. Emission Limitation

38.5 tons per rolling, 12 month period combined NO_x emissions from B034 and B035

Applicable Compliance Method:

The monitoring and record keeping requirements under d)(11) and d)(13) shall serve as demonstration of compliance with this emission limitation.

m. Emission Limitation:

1.90 pound per hour VOC emissions

Applicable Compliance Method:

Multiply the AP-42 section 1.4 VOC emission factor dated July 1998 of 5.5 lb/mmcf of fuel gas burned corrected for heating value by the daily average fuel gas burned per hour. The heating value correction factor is equal to the ratio of the actual fuel gas heat content to the AP-42 heat content of 1020 Btu/scf. If required, the permittee shall demonstrate compliance using Methods 1 through 4 and 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

n. Emission Limitation:

8.34 ton per rolling, 12-month period VOC emissions

Applicable Compliance Method:

Annual allowable emissions are based upon operation at maximum capacity for 8760 hours per year. Compliance with the hourly VOC emissions limit constitutes compliance with the annual limit.

o. Emission Limitation:

16.67 tons per rolling, 12 month period combined VOC emissions from B034 and B035

Applicable Compliance Method:

The monitoring and record keeping requirements under d)(11) and d)(15) shall serve as demonstration of compliance with this emission limitation.

p. Emission Limitation:

1.01 ton per year H_2SO_4 emissions

Applicable Compliance Method:

The permittee establishes that 3% of the SO_2 emissions are converted to H_2SO_4. Compliance shall be demonstrated by multiplying the maximum annual SO_2 emissions rate (22 tons/yr) by 0.03 multiplied by the molecular weight of H_2SO_4 and divided by the molecular weight of SO_2. After the completion and construction and the initial shakedown of the Coker Gas Plant (P068), this limit will no longer be in effect, and the limit in f)(1)q. will be in effect .

q. Emission Limitation:

1.59 ton per year H_2SO_4 combined B034 and B035

Applicable Compliance Method

After the completion and construction and the initial shakedown of the Coker Gas Plant (P068), this limit will be effective. Compliance shall be demonstrated by

multiplying the maximum annual combined SO_2 emissions rate (34.7 tons/yr) by 0.03 multiplied by the molecular weight of H_2SO_4 and divided by the molecular weight of SO_2. Compliance with the annual combined SO_2 limit for B034 and B035 of 34.7 ton/yr SO_2 demonstrates compliance with this limit.

r. Emission Limitation:

0.10 lb NOx/mmBtu (expressed as NO_2)

Applicable Compliance Method:

The NOx CEMS data shall be used to demonstrate compliance with this emission limitation and procedures outlined in 40 CFR 60.46b(e)(3).

g) Miscellaneous Requirements

(1) Excessive Audit Inaccuracy. If the RA, using the RATA, CGA, or RAA exceeds the criteria in section 5.2.3, the CEMS is out-of-control. If the CEMS is out-of-control, take necessary corrective action to eliminate the problem. Following corrective action, the source permittee must audit the CEMS with a RATA, CGA, or RAA to determine if the CEMS is operating within the specifications. A RATA must always be used following an out-of-control period resulting from a RATA. The audit following corrective action does not require analysis of USEPA performance audit samples. If audit results show the CEMS to be out-of-control, the CEMS operator shall report both the audit showing the CEMS to be out-of-control and the results of the audit following corrective action showing the CEMS to be operating within specifications.

15. Emissions Unit Group -Coker 2 & Naphtha Treater Heater: B017, B022,

EU ID	Operations, Property and/or Equipment Description
B017	Coker II Heater: PR-56924, 80 mmBtu/hr (HHV rated) process heater fired with refinery fuel gas, natural gas, and/or LP Gas
B022	Naphtha Treater Heater: PR-562958 80 mmBtu/hr (HHV rated) process heater fired with refinery fuel gas, natural gas, and/or LP Gas

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(D)	See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, unless otherwise specified by the rule.
c.	OAC rule 3745-17-10(B)(1)	PE shall not exceed 0.020 pound per million Btu of heat input. See c)(1).
d.	OAC rule 3745-18-54(W)(1)	See b)(2)e.
e.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	See b)(2)f.
f.	40 CFR Part 60, Subpart J (40 CFR 60.100-109)	See b)(2)c. and b)(2)d. [60.104(a)(1)]

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 60.101 This emissions unit is a fuel gas combustion device located at a petroleum refinery and subject to the applicable emissions limitations/ control requirements specified in this section.]	
g.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 16)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1-16 apply.
h.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480-7575) [In accordance with 63.7575, this emissions unit is in the ”unit designed to fire gas 1 fuels” subcategory existing process heater located at a major source of HAP emissions and subject to the applicable emissions limitations/ control requirements specified in this section.]	See b)(2)g. and c)(2) [63.7500(a) Table 3 requirements]

(2) Additional Terms and Conditions

a. Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), demonstration with the emissions of sulfur dioxide (SO_2) from B022 (Naphtha Hydrotreater Heater) shall not exceed 6.45 tons per rolling, 12-month period.

Section B.9..of this permit outlines the monitoring, record keeping and reporting requirements and compliance demonstration required to maintain compliance with this emissions limit.

b. Pursuant to Permit to Install 04-01290 issued 7/25/2002, this emissions unit is subject to the requirements of 40 CFR 60 Subpart J.

c. The permittee shall burn no fuel gas in this emissions unit that has a volume-weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of

162 parts per million by volume of H_2S on a dry basis. Pursuant to the fuel gas definition in 40 CFR 60.101(d), this standard is also applicable if the permittee combines and combusts natural gas or liquefied petroleum (LP) gas in any proportion with refinery fuel gas in this emissions unit.

d. The permittee may choose to comply with the applicable provisions of 40 CFR Part 60, Subpart Ja to satisfy the requirements of this subpart for this emissions unit.

e. The emission limitation specified by OAC rule 3745-18-54(W)(1) is less stringent than the emission limitation specified pursuant to 40 CFR 60.104(a)(1).

f. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit.

g. This emissions unit is subject to the initial notification requirements of 40 CFR 63 Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, SSMP, or site-specific monitoring plans of this Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A).

c) Operational Restrictions

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

(2) [40 CFR 63.7500(a) – Table 3]
An existing process heater in the Gas 1 subcategory with heat input capacity of 10 million Btu per hour or greater shall conduct a tune-up of the boiler or process heater as specified in § 63.7540(a)(10) or (a)(12). Pursuant to 63.7540(a)(13), If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

d) Monitoring and/or Recordkeeping Requirements

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

(2) The permittee shall maintain a written quality assurance/quality control plan for the continuous hydrogen sulfide monitoring system, designed to ensure continuous valid and representative readings of hydrogen sulfide emissions in units of the applicable standard(s). 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 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

(3) The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[40 CFR 60.2] and/or [40 CFR 63.2] and [Appendix F to 40 CFR Part 60]

(4) The permittee shall record the following for B022 (Naphtha Hydrotreater Heater):

a. the volume of fuel gas combusted per month; and

b. the volume of fuel gas combusted per rolling, 12-month period.

(5) In order to demonstrate compliance with the emission limitation of 230 mg/dscm (0.10 grain/dscf or 162 parts per million by volume dry basis) of H_2S 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_2S 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 shall be 425 mg/dscm of H_2S.

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_2S in the fuel gas being burned.

c. The performance evaluations for this H_2S monitor under 40 CFR 60.13(c) shall use Performance Specification 7 of 40 CFR, Part 60, Appendix B. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations.

(6) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendix B, the permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous hydrogen sulfide monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(7) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F, the permittee shall operate and maintain equipment to continuously monitor and record hydrogen sulfide content of the fuel burned in this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

a. hydrogen sulfide content of the fuel burned in parts per million for each cycle time of the analyzer, pursuant to 40 CFR Part 60.7(f);

b. hydrogen sulfide content of the fuel burned, in units of the applicable standard(s) and in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system;

g. the date, time, and hours of operation of the emissions unit without the continuous hydrogen sulfide monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous hydrogen sulfide monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in g. and h.

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

(8) The permittee shall maintain records of the monthly average H_2S of the fuel burned in this emissions unit as well as the rolling, 12-month SO_2 emissions.

Beginning after the completion of construction and initial shakedown of the Coker Gas Plant (P068), this term and condition will become void, and the terms and conditions of Section B.9.a.will become applicable.

e) Reporting Requirements

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

(2) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the

requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide content in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be within 30 days following the end of each calendar quarter and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;

vii. results and dates of quarterly cylinder gas audits;

viii. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

ix. unless previously submitted, the results of any relative accuracy test audit showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;

x. total duration of excess emissions during the period, and if the total duration of excess emissions for the reporting period is greater than 1% of the total operating time for the period, then the report should also include the date, time, and duration of any/each individual time period of excess emissions and specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility;

xi. total duration of CMS downtime for the reporting period, and if the total period CMS downtime is greater than 5% of the total operating time of the period, then the report should also include the date, time, and duration of any downtime** of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation; and

xii. the reason (if known) and the corrective actions taken (if any) for each event in b.x. and xi.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime event shall be reported regardless if there is an exceedance of any applicable limit

*** Downtime is time when the unit is operating and there is not sufficient valid data to calculate an hourly average per 40 CFR 60.13(h)(2).

(3) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

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

a. Emission Limitation:

The permittee shall burn no fuel gas in this emissions unit that has a volume weighted 3-hour average hydrogen sulfide (H_2S) concentration in excess of 230 mg/dscm (0.10 gr/dscf), or the U.S. EPA recognized equivalent concentration of 162 parts per million by volume of H_2S on a dry basis.

Applicable Compliance Method:

Ongoing compliance with the hydrogen sulfide emission limitation(s) 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 Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

b. Emission Limitation:

Visible particulate emissions shall not exceed 20% opacity, unless otherwise specified by the rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using Method 9 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

c. Emission Limitation:

6.45 tons SO_2 per rolling, 12 month period for B022 (Naphtha Hydrotreater Heater)

Applicable Compliance Method:

This limit takes effect upon the completion of construction and the initial shakedown of the Coker Gas Plant (P068). Compliance with this emissions limit shall be demonstrated by using the fuel burned in this heater recorded in d)(4) above and the total sulfur value recorded in accordance with the terms and conditions of Section B.9.a using the following calculation.

i. Multiply the monthly average sulfur concentration by the molecular weight of SO_2 (64 lb/lbmol) and divide by the ideal gas conversion factor of 379 scf/lbmol to obtain the SO_2 emission factor in units of lb/MMSCF
ii. Multiply the SO_2 emission factor by the monthly total gas flow to determine the lbs SO_2 per month; and
iii. Add the monthly total to the total for the previous 11 calendar months to determine the rolling, 12-month total SO_2 emissions.
*this formula assumes that 1 mole of H2S converts to 1 mole of SO_2

d. Emission Limitation:

PE shall not exceed 0.020 pound per million Btu of heat input.

Applicable Compliance Method:

Compliance with this limit is demonstrated through condition c)(1), which requires the permittee to burn only refinery fuel gas, natural gas, or LP gas in this emissions unit.

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

g) Miscellaneous Requirements

(1) None.