



4/9/2015

Certified Mail

David Elder
 Marathon Petroleum Company LP - Canton Refinery
 2408 Gambrinus Avenue SW
 Canton, OH 44706

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
 Facility ID: 1576002006
 Permit Number: P0118201
 Permit Type: Administrative Modification
 County: Stark

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

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 Canton City Health Department at (330)489-3385 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Erica R. Engel-Ishida, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
Canton; Pennsylvania; West Virginia



FINAL

**Division of Air Pollution Control
Permit-to-Install**

for

Marathon Petroleum Company LP - Canton Refinery

Facility ID:	1576002006
Permit Number:	P0118201
Permit Type:	Administrative Modification
Issued:	4/9/2015
Effective:	4/9/2015



Division of Air Pollution Control
Permit-to-Install
for
Marathon Petroleum Company LP - Canton Refinery

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Authorization

Facility ID: 1576002006
Facility Description: Petroleum Refinery
Application Number(s): M0003142
Permit Number: P0118201
Permit Description: Administrative modification to reflect the current requirements of 40 CFR 60, Subpart Ja to include the installation of NOx and O2 continuous emission monitors to comply with the requirements of 40 CFR 60.107a(c).
Permit Type: Administrative Modification
Permit Fee: \$200.00
Issue Date: 4/9/2015
Effective Date: 4/9/2015

This document constitutes issuance to:

Marathon Petroleum Company LP - Canton Refinery
2408 Gambrinus Avenue SW
Canton, OH 44706

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:

Canton City Health Department
420 Market Avenue
Canton, OH 44702-1544
(330)489-3385

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



Final Permit-to-Install
Marathon Petroleum Company LP - Canton Refinery
Permit Number: P0118201
Facility ID: 1576002006
Effective Date:4/9/2015

Authorization (continued)

Permit Number: P0118201

Permit Description: Administrative modification to reflect the current requirements of 40 CFR 60, Subpart Ja to include the installation of NOx and O2 continuous emission monitors to comply with the requirements of 40 CFR 60.107a(c).

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

Emissions Unit ID:	B033
Company Equipment ID:	DHT Reactor Charge Heater
Superseded Permit Number:	P0116537
General Permit Category and Type:	Not Applicable



Final Permit-to-Install
Marathon Petroleum Company LP - Canton Refinery
Permit Number: P0118201
Facility ID: 1576002006
Effective Date:4/9/2015

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 Canton City Health Department.



- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Canton City Health Department. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the Canton City Health Department every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

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

14. Public Disclosure

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

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

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly 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.



Final Permit-to-Install
Marathon Petroleum Company LP - Canton Refinery
Permit Number: P0118201
Facility ID: 1576002006
Effective Date:4/9/2015

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) [OAC rule 3745-15-03(A)]
Unless other arrangements have been approved by the Canton City Health Department, Air Pollution Control Division, all notifications and reports shall be submitted through Ohio EPA's eBusiness Center: Air Services online web portal.

2. [OAC rule 3745-31-10(A)(1)]
Before beginning actual construction of the New Source Review (NSR) project, the permittee shall document and maintain a record of the following information:
 - a) a description of the NSR project;
 - b) identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the NSR project; and
 - c) a description of the applicability test used to determine that the NSR project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of "could have accommodated" emissions excluded under paragraph (GGGGG)(3) of rule 3745-31-01 of the Administrative Code and an explanation for why such amount was excluded, and any netting calculations, if applicable.

3. [OAC rule 3745-31-10(A)(2)]
The information required in OAC rule 3745-31-10(A)(2) was documented and submitted to the Ohio EPA within the Permit-to-Install (PTI) application for the ULSD Project.

4. [OAC rule 3745-31-10(A)(3)]
The permittee shall calculate the Nitrogen Oxides (NO_x) and Sulfur Dioxide (SO₂) emissions from the emissions units affected by the ULSD Project (i.e. B023, B028, B029, B033, P011, and P016) as identified in the PTI application and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change.

5. [OAC rule 3745-31-10(A)(5)]
The permittee shall submit a report to the Director if the annual emissions, in tons per year as calculated pursuant to OAC rule 3745-31-10(A)(3), from the ULSD Project, exceed 82.38 tons of NO_x per year and 52.76 tons of SO₂ per year (i.e. the baseline actual emissions increase by a significant amount) and if such emissions differ from the preconstruction projection as documented and maintained pursuant to OAC rule 3745-31-10-(A)(1). Such reports shall but submitted to the Director within 60 days after the end of such year. The report shall contain the following:
 - a) the name, address, and telephone number of the major stationary source;
 - b) the annual emissions as calculated pursuant to OAC rule 3745-31-10(A)(3); and
 - c) any other information that the permittee wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

6. [40 CFR 63.6(b)(2)], [40 CFR 63.7485], [40 CFR 63.7490], and [40 CFR 63.7495]



The permittee shall comply with the applicable provisions of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, as promulgated by the United States Environmental Protection Agency under 40 CFR Part 63, Subpart DDDDD. The final rules found in 40 CFR Part 63, Subpart DDDDD establish national emission standards for hazardous air pollutants, operational limits, work practice standards, and compliance requirements for industrial, commercial, and institutional boilers and process heaters located at a major source of Hazardous Air Pollutants (HAPs). The permittee shall comply with the requirements and limits of this NESHAP for the facility's new (commenced construction after 06/04/10) process heaters by the compliance date identified in 40 CFR 63.7495(a) or upon startup, and the facility's existing process heaters shall be in compliance with 40 CFR Part 63, Subpart DDDDD no later than the compliance date identified in 40 CFR 63.7495(b).

7. [40 CFR Part 63, Subpart DDDDD]

The terms in this permit identify the requirements of the National Emissions Standards for Hazardous Air Pollutants contained in 40 CFR Part 63, Subpart DDDDD and are meant to help the permittee maintain compliance with this NESHAP. The requirements of this subpart apply to the facility process heater according to its applicable subcategory, as defined in 40 CFR 63.7575.



C. Emissions Unit Terms and Conditions



1. B033, DHT Reactor Charge Heater

Operations, Property and/or Equipment Description:

Ultra Low Sulfur Diesel (ULSD) Distillate Hydrotreater (DHT) Reactor Charge Heater (55 MMBtu/hr) equipped 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) b)(1)d.
- 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) OAC rule 3745-31-05(A)(3) [Best Available Technology (BAT) for sources greater than 10 tons/yr] (PTI 15-01682, as effective 03/13/2008)	Carbon Monoxide (CO) emissions shall not exceed 4.53 pounds per hour (lbs/hr) and 19.84 tons per year (tons/yr) See b)(2)a.
b.	OAC rule 3745-31-05(A)(3), as effective 06/30/2008 [BAT for sources with less than 10 tons/yr]	Particulate emissions (PE) shall not exceed the emission limit per OAC rule 3745-17-10(B)(1), as detailed below Nitrogen Oxide (NO _x) emissions and Sulfur Dioxide (SO _x) emissions shall not exceed the emissions limit per OAC rule 3745-31-05(E), as detailed below See b)(2)b. – c.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 06/30/2008 [Less than 10 tons/yr BAT exemption]	See b)(2)d.
d.	OAC rule 3745-31-05(E) [Voluntary Restriction to avoid BAT]	NO _x emissions shall not exceed 9.90 tons/yr



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	(PTI 15-01682, as effective 03/13/2008)	SO ₂ emissions shall not exceed 0.025 pound per million British thermal units (lb/MMBtu) of actual heat input See b)(2)d.ii. and c)(1)
e.	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 lb/MMBtu of actual heat input
f.	OAC rule 3745-17-07(A)	Visible emissions shall not exceed 20% opacity as a 6-minute average, except as provided by rule
g.	OAC rule 3745-18-82(E)(2)	The 1.0 lb SO ₂ /MMBtu emission limitation specified in this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(E)
h.	40 CFR Part 60, Subpart A (40 CFR 60.1-19)	General Provisions See b)(2)e.
i.	40 CFR Part 60, Subpart Ja (40 CFR 60.100a – 109a) [In accordance with 40 CFR 60.102a(g) and 60.107a(c)(6), this emissions unit is defined as a process heater (fuel gas combustion device in a petroleum refinery) with a rated capacity of greater than 40 MMBtu/hr and less than 100 MMBtu/hr equipped with low-NO _x burners, for which construction commenced after May 14, 2007.]	The permittee shall comply with either of the following limits at any time: (i) not discharge or cause the discharge of any gases into the atmosphere that contain SO ₂ in excess of 20 parts per million by volume (ppmv) (dry basis, corrected to 0% excess air), determined daily on a 365 successive calendar day rolling average basis; or [40 CFR 60.102a(g)(1)(i)] (ii) not burn any fuel gas that contains Hydrogen Sulfide (H ₂ S) in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H ₂ S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis [40 CFR 60.102a(g)(1)(ii)] See b)(2)f. The permittee shall comply with either of the following limits at any time: (i) not discharge to the atmosphere any



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		emissions of NO _x in excess of 40 ppmv (dry basis, corrected to 0% excess air) determined daily on a 30-day rolling average basis; or [40 CFR 60.102a(g)(2)(i)(A)] (ii) not discharge to the atmosphere any emissions of NO _x in excess of 0.040 lb/MMBtu higher heating value basis determined daily on a 30-day rolling average basis [40 CFR 60.102a(g)(2)(i)(B)] See b)(2)g.
j.	40 CFR Part 63, Subpart A (40 CFR 63.1 – 16)	General Provisions
k.	40 CFR Part 63, Subpart DDDDD (40 CFR 63.7480 – 7575) [In accordance with 40 CFR 63.7490, this emissions unit is an “existing source” process heater unit designed to burn gas 1 fuels constructed prior to June 4, 2010 and located at a major source of Hazardous Air Pollutants (HAPs)]	Work Practice Standards See b)(2)h. The permittee shall demonstrate compliance with any limit that is published in a final amendment to Subpart DDDDD as required by the subpart

(2) Additional Terms and Conditions

- a. The pounds per hour and tons per year emissions limitations for Carbon Monoxide (CO) are based on potential to emit. Therefore, no additional monitoring, recordkeeping, or reporting requirements are necessary to ensure compliance with these emission limitations.
- b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(E) and 40 CFR Part 60, Subpart Ja.
- c. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of Ohio’s State Implementation Plan (SIP).
- d. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of Ohio’s SIP:



- i. The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the Particulate Emissions (PE) from this air contaminant source since the calculated annual emissions rate for PE is less than 10 tons/yr taking into account the federally enforceable rule limit of 0.020 lb of PE/MMBtu of actual heat input under OAC rule 3745-17-10(B)(1).
- ii. The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the Nitrogen Oxide (NO_x) and Sulfur Dioxide (SO₂) emissions from this air contaminant source since the annual emission rate for NO_x and SO₂ are less than 10 tons/yr taking into account the voluntary emission limitations as proposed by the permittee for the purpose of avoiding BAT requirements as established in Permit-to-Install (PTI) 15-01682 as effective on 03/13/2008 pursuant to OAC 3745-31-05(E) as listed in term b)(1)d. above.
- e. The application and enforcement of the provisions of the New Source Review Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).
- f. For each fuel gas combustion device subject to 40 CFR Part 60, Subpart Ja, the permittee shall comply with either the emission limit in 40 CFR 60.102a(g)(1)(i) or the fuel gas concentration limit in 40 CFR 60.102a(g)(1)(ii).
- g. The permittee may comply with either the limit provided in 40 CFR 60.102a(g)(2)(i)(A) or the limit provided in 40 CFR 60.102a(g)(2)(i)(B) at any time, provided that the appropriate parameters for each alternative are monitored as specified in 40 CFR 60.107a. If the permittee elects to comply with the limit provided in 40 CFR 60.102a(g)(2)(i)(B), the permittee must additionally comply with the necessary monitoring requirements specified in 40 CFR 60.107a(d), as provided in term d)(1) of this permit.
- h. The permittee shall comply with the applicable requirements under 40 CFR Part 60, Subpart DDDDD, including the following sections:

40 CFR 63.7495(b)	Compliance no later than January 31, 2016
40 CFR 63.7500(a)(1)	Work Practice Standards in Table 3 of 40 CFR Part 63, Subpart DDDDD
40 CFR 63.7500(a)(3)	Safety and good air pollution control practices for minimizing emissions
40 CFR 63.7500(b)	Alternative work practice standards
40 CFR 63.7500(e)	Units designed to burn gas 1 fuels are not subject to emission or operating limits in 40 CFR Part 63, Subpart DDDDD
40 CFR 63.7500(f); and 40 CFR 63.7505(a)	Compliance with work practice standards is required at all times



40 CFR 63.7565	Applicable requirements of the General Provisions in 40 CFR Part 63, Subpart A
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c) Operational Restrictions

- (1) The permittee shall burn only refinery fuel gas, natural gas, and/or landfill gas in this emissions unit. Hereinafter, this mixture of fuel gases shall be referred to as “refinery fuel gas.” The sulfur content of the refinery fuel gas burned in this emissions unit shall comply with the allowable emission limitations of 0.025 lb SO₂/MMBtu of actual heat input.
- (2) The permittee shall comply with the applicable work practice standards required pursuant to 40 CFR Part 60, Subpart Ja:

40 CFR 60.103a(c)(2)	Root cause analysis and corrective action analysis of SO ₂ emissions in excess of 500 lbs over the applicable 40 CFR 60.102a(g)(1) emissions limit in any 24-hour period
40 CFR 60.103a(d)	Complete root cause analysis and corrective action analysis no later than 45 days after discharge
40 CFR 60.103a(e)(1) – (3)	Implementation of corrective actions

- (3) The permittee shall comply with the applicable work practice standards required pursuant to 40 CFR Part 63, Subpart DDDDD:

40 CFR 63.7510(e); 40 CFR 63.7530(e); and 40 CFR Part 63, Subpart DDDDD Table 3	For each existing process heater, an initial tune-up and a one-time energy assessment must be performed no later than the compliance date identified in 40 CFR 63.7495. The required information for the energy assessment and the frequency of tune-ups is identified in Table 3
40 CFR 63.7515(d); and 40 CFR 63.7540(a)(10) and (13)	Conduct an annual performance tune-up according to 40 CFR 63.7540(a)(10). Each annual tune-up must be no more than 13 months after the previous tune-up

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall comply with the applicable monitoring and recordkeeping requirements pursuant to 40 CFR Part 60, Subpart Ja:

40 CFR 60.107a(a)(1)	Continuous monitoring of SO ₂ emissions if complying with the SO ₂ emission limits in 40 CFR 60.102a(g)(1)(i)
40 CFR 60.107a(a)(2)	Continuous monitoring of H ₂ S fuel gas concentration



	if complying with the H ₂ S concentration limits in 40 CFR 60.102a(g)(1)(ii)
40 CFR 60.107a(c)	If complying with limit in 40 CFR 60.102a(g)(2)(i)(A), the permittee shall install NO _x and O ₂ monitors complying with 40 CFR 60.107a(c)(1) – (5), except as provided in 40 CFR 60.107a(c)(6)
40 CFR 60.107a(c)(1)	NO _x monitor performance specifications and span value
40 CFR 60.107a(c)(2)	NO _x monitor performance evaluations
40 CFR 60.107a(c)(3)	O ₂ monitor performance specification and span value
40 CFR 60.107a(c)(4)	O ₂ monitor performance evaluations
40 CFR 60.107a(c)(5)	NO _x and O ₂ monitor quality assurance requirements
40 CFR 60.107a(c)(6)	Monitoring options for process heaters less than 100 MMBtu/hr
40 CFR 60.108a(c)(6)	Records of SO ₂ discharges greater than 500 lbs/24-hr period
If complying with the heating value – based limit in 40 CFR 60.102a(g)(2)(i)(B) per term b)(2)g., the permittee shall also comply with the following:	
40 CFR 60.107a(d)	Install/operate NO _x monitor; determine F factor of fuel gas stream daily
40 CFR 60.107a(d)(1)	Comply with 40 CFR 60.107a(c)(1) – (5), unless complying with 40 CFR 60.107a(d)(8)
40 CFR 60.107a(d)(2)	Fuel stream sampling and analysis requirements to determine F factor
40 CFR 60.107a(d)(3)	Install/operate gas composition analyzer and determination of F factor [alternative to 40 CFR 60.107a(d)(2)]
40 CFR 60.107a(d)(4)	Compositional monitor performance evaluation requirements
40 CFR 60.107a(d)(8)	Alternative to requirements of 40 CFR 60.107a(d)(1) – (4)

- (2) The permittee shall comply with the applicable monitoring and recordkeeping requirements pursuant to 40 CFR Part 63, Subpart DDDDD:

40 CFR 63.7555(a); and 40 CFR 63.7560(a) – (c)	General recordkeeping requirements
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40 CFR 63.7555(h)	Records of alternative fuel use
40 CFR 63.755(i) and (j)	Records of each startup and shutdown

(3) By no later than September 1, 2016, the permittee shall have completed the installation and commenced the operation of a continuous NO_x monitoring system and a continuous O₂ monitoring system in order to obtain compliance with 40 CFR Part 60, Subpart Ja and term d)(1). As an alternative to installing a continuous NO_x monitoring system, the permittee may elect to comply with the monitoring options in 40 CFR 60.107a(c)(6) to demonstrate compliance.

(4) The permittee shall maintain a written quality assurance/quality control plan for the continuous H₂S 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. The relative accuracy test audits shall also follow the requirements listed in term f)(1)f.

(5) Each continuous NO_x monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. At least 45 days before commencing certification testing of the continuous NO_x monitoring system, 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.

(6) Each continuous O₂ monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 3. At least 45 days before commencing certification testing of the continuous O₂ monitoring system, the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of O₂ 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 O₂ 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.

- (7) 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.
- (8) 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 H₂S 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 the Canton City Health Department, Air Pollution Control Division) upon request.

- (9) 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 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 2. 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 the Canton City Health Department, Air Pollution Control Division) upon request.
- (10) Prior to the installation of the continuous O₂ 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 3. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous O₂ monitoring system meets the requirements of Performance Specification 3. 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 the Canton City Health Department, Air Pollution Control Division) upon request.
- (11) The permittee shall operate and maintain a continuous emission monitoring system to continuously monitor and record H₂S emissions from this emissions unit in units of the applicable standards. 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 H₂S monitoring system including, but not limited to:

- a. emissions of H₂S, in units of ppmv as a rolling, 3-hour average, with no resolution less than one data point per minute required;



- b. emissions of H₂S, in units of ppmv determined daily on a 365 successive calendar day rolling average basis;
- 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 audits, including results in units of the applicable standards;
- f. hours of operation of the emissions unit, continuous H₂S 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 H₂S 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 H₂S monitoring system; as well as
- i. the reason (if known) and the corrective actions taken (if any) for each such event in term d)(11)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.

- (12) 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 all data obtained by the continuous NO_x monitoring system including, but not limited to:

- a. emissions of NO_x, in units of ppm for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of NO_x, in units of the applicable standard(s) 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 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 term d)(12)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.

- (13) The permittee shall operate and maintain equipment to continuously monitor and record O₂ emitted from this emissions unit in percent O₂. 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 O₂ monitoring system including, but not limited to:

- a. the percent O₂ with each cycle time of the analyzer, with no resolution less than one data point per minute required;
- 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);
- e. hours of operation of the emissions unit and continuous O₂ monitoring system;
- f. the date, time, and hours of operation of the emissions unit without the continuous O₂ monitoring system;
- g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous O₂ monitoring system; as well as,
- h. the reason (if known) and the corrective actions taken (if any) for each such event in term d)(13)f. and g.

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 collect samples, at least three times per week, of the refinery fuel gas for gas chromatographic analysis. The permittee shall collect refinery fuel gas samples using procedures that will ensure that ample containers are adequately purged prior to sample collection, thereby, ensuring a representative fuel gas sample. The permittee shall maintain a copy of the sampling procedures on-site.
- (15) The permittee shall maintain records of the weekly average actual heating value of the refinery fuel gas as burned in this emissions unit. The actual heating value (H), in British thermal units per standard cubic feet (Btu/scf), of the refinery fuel gas shall be calculated as follows from the results of a weekly refinery fuel gas compositional analysis using gas chromatography:

$$H = \sum (h_i * m_i)$$

Where:

- = Higher heating value (HHV) of each chemical compound detected in the refinery fuel gas, in Btu/lb of chemical, as found in the most recent edition of the Gas Processors Supplies Association (GPSA) manual; and
- = Mass fraction of each chemical compound detected in the refinery fuel gas using chromatographic analysis.

- (16) The permittee shall use one of the following methods to conduct the compositional analysis of the refinery fuel gas samples:

ASTM D1945-96

ASTM D1945-96 (Wasson Modification)

GPA Method 2261-90

When using the Wasson Modification of ASTM Method D1945-96, the permittee shall follow, at a minimum, QA/QC requirements specified in ASTM D1945-96. The permittee shall also operate and maintain the Wasson gas chromatographic instrumentation according to the manufacturer's specifications and recommendations. Alternative, equivalent methods may be used with written approval by the Canton City Health Department, Air Pollution Control Division upon request.

- (17) The permittee shall maintain monthly records of the amount of gas, in dry standard cubic feet (dscf) of gas, used as fuel in this emissions unit, and the average monthly Higher Heating Value for each gas used as fuel in Btu/dscf of gas burned.
- (18) For each day during which the permittee burns a fuel other than refinery fuel gas, the permittee shall maintain a record of the type, quantity, sulfur content (in lb of sulfur/MMdscf) and heating value (in Btu/dscf) of the fuel burned.
- (19) The permittee shall calculate and maintain records of total NO_x emissions, in tons/yr, from this emissions unit.



- (20) The permittee shall maintain records of each weekly average of the SO₂ mass emission rate, in lbs/MMBtu, discharged from this emissions unit. The SO₂ emissions rate shall be calculated as follows:

$$ER_{SO_2} = \frac{\left[(Conc_{H_2S}) * \left(\frac{1 \text{ scf } H_2S}{1 * 10^6 \text{ ppmv}} \right) * \left(\frac{1 \text{ mole } H_2S}{379 \text{ scf } H_2S} \right) * \left(\frac{1 \text{ mole } SO_2}{1 \text{ mole } H_2S} \right) * \left(\frac{64 \text{ lbs } SO_2}{1 \text{ mole } SO_2} \right) \right]}{(HV)}$$

Where:

ER_{SO_2} = weekly SO₂ mass emission rate, lbs/MMBtu

$Conc_{H_2S}$ = weekly average H₂S concentration from the continuous emission monitoring system, ppmv

HV = weekly average recorded heating value of the refinery fuel gas, MMBtu

e) Reporting Requirements

- (1) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous H₂S monitoring system. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division within 30 days following the end of each calendar quarter (January 31st, April 30th, July 31st, and October 31st).
- a. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas is burned in this emissions unit.
 - b. Pursuant to the monitoring, recordkeeping, and reporting requirements for the continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit quarterly reports documenting all instances of H₂S 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 document the following:
 - i. the date that the exceedance occurred;
 - ii. commencement and completion times of the exceedance;
 - iii. the duration and magnitude of each exceedance;
 - iv. the reason (if known) and the corrective actions taken (if any) for each exceedance; as well as,
 - v. whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system.

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

- c. These quarterly reports 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 H₂S 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 H₂S monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction** of the continuous H₂S monitoring system, emissions unit, and/or control equipment;
- xii. the date, time, and duration of any downtime** of the continuous H₂S 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 term e)(1)c.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 has not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

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



- (2) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring system. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division within 30 days following the end of each calendar quarter (January 31st, April 30th, July 31st, and October 31st).
- a. Pursuant to the monitoring, recordkeeping, and reporting requirements for the continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit quarterly reports 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 following:
- i. the date that the exceedance occurred;
 - ii. commencement and completion times of the exceedance;
 - iii. the duration and magnitude of each exceedance;
 - iv. the reason (if known) and the corrective actions taken (if any) for each exceedance; as well as,
 - v. whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system.

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

- b. These quarterly reports 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. 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 NO_x monitor out-of-control and the compliant results following any corrective actions;
- xi. the date, time, and duration of any/each malfunction** of the continuous NO_x monitoring system, emissions unit, and/or control equipment;
- xii. 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 correction actions taken (if any) for each event in term e)(2)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 has not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

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

- (3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous O₂ monitoring system. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division within 30 days following the end of each calendar quarter (January 31st, April 30th, July 31st, and October 31st).
 - a. Pursuant to the monitoring, recordkeeping, and reporting requirements for the continuous monitoring system contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit quarterly reports documenting all instances of continuous O₂ monitoring system downtime and malfunction while the emissions unit was on line.
 - b. These quarterly reports shall include the following:
 - i. the facility name and address;
 - ii. the manufacturer and model number of the continuous O₂ 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 total operating time (hours) of the emissions unit;
- v. the total operating time of the continuous O₂ monitoring system while the emissions unit was in operation;
- vi. results and dates of quarterly cylinder gas audits;
- vii. unless previously submitted, results and dates of the relative accuracy test audit(s) (during appropriate quarter(s));
- viii. unless previously submitted, the results of any relative accuracy test audit showing the continuous O₂ monitor out-of-control and the compliant results following any corrective actions;
- ix. the date, time, and duration of any/each malfunction* of the continuous O₂ monitoring system while the emissions unit was in operation;
- x. the date, time, and duration of any downtime* of the continuous O₂ monitoring system while the emissions unit was in operation; and
- xi. the reason (if known) and the corrective actions taken (if any) for each event in term e)(3)b.ix. and x.

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

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

- (4) The permittee shall comply with the applicable reporting requirements pursuant to 40 CFR Part 60, Subpart Ja:

40 CFR 60.108a(d)	Excess emissions report (the content required under 40 CFR 60.108a(d)(1) – (7) can be included with the report required in term e)(1) – (3) above)
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- (5) The permittee shall comply with the applicable notification requirements pursuant to 40 CFR Part 60, Subpart A:

40 CFR 60.7(a)(1)	Date construction commenced
40 CFR 60.7(a)(3)	Date of initial startup
40 CFR 60.8(d)	Notification of performance testing

- (6) The permittee shall comply with the applicable reporting requirements pursuant to 40 CFR Part 63, Subpart DDDDD:



40 CFR 63.7495(d); and 40 CFR 63.7545(a)	Notification requirements
40 CFR 63.7545(c)	Initial notification
40 CFR 63.7545(e); and 40 CFR 63.7530(d) – (f)	Notification of compliance status
40 CFR 63.7545(f)	Notification of alternative fuel use
40 CFR 63.7545(h)	Notification for switching fuel category
40 CFR 63.7550(a)	Table 9 to Subpart DDDDD of 40 CFR Part 63 – reporting requirements
40 CFR 63.7550(b); (c); (e); and (h)	Compliance reports

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:

4.53 lbs CO/hr

19.84 tons CO/yr

Applicable Compliance Method:

The lbs/hr CO limit was established based on the CO emission factor for Controlled – Low NO_x burners found in AP-42, Chapter 1.4 Natural Gas Combustion [07/98] and the following calculation:

$$\frac{84 \text{ lbs}}{\text{MMscf}} * \frac{\text{MMscf}}{1,020 \text{ MMBtu}} * \frac{55 \text{ MMBtu}}{\text{hr}} = 4.53 \frac{\text{lbs}}{\text{hr}} \text{ CO}$$

Where:

$\frac{84 \text{ lbs}}{\text{MMscf}}$ = CO emission factor for small boilers with <100 MMBtu/hr heat input per AP-42, Chapter 1.4, Table 1.4-1

$\frac{1,020 \text{ MMBtu}}{\text{MMscf}}$ = average natural gas higher heating value per AP-42, Chapter 1.4, Table 1.4-1, footnote a.

$\frac{55 \text{ MMBtu}}{\text{hr}}$ = maximum heat input capacity



If required, compliance with the lbs CO/hr emissions limitation shall be determined through emissions testing in accordance with Methods 1-4 and 10 of 40 CFR Part 60, Appendix A.

The annual emission limitation was established by multiplying the hourly emissions limitation by 8,760 hrs/yr and dividing by 2,000 lbs/ton, which is demonstrated by the following calculation:

$$\frac{4.53 \text{ lbs}}{\text{hr}} * \frac{8,760 \text{ hrs}}{\text{yr}} * \frac{\text{ton}}{2,000 \text{ lbs}} = 19.84 \frac{\text{tons}}{\text{yr}} \text{CO}$$

Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation will be satisfied.

b. Emission Limitation:

9.90 tons NO_x/yr

Applicable Compliance Method:

Compliance with the tons/yr NO_x limit shall be demonstrated based upon the monitoring and recordkeeping requirements specified in term d)(12).

The emission limitation was supplied by the permittee in permit application #A0011668 to Permit-to-Install #15-01682 for the purposes of avoiding BAT requirements.

c. Emission Limitation:

0.025 lb SO₂/MMBtu

Applicable Compliance Method:

SO₂ compliance is demonstrated through the use of the monitoring and recordkeeping requirements specified in term d)(20).

This emission limitation was supplied by the permittee in permit application #A0011668 to Permit-to-Install #15-01682.

d. Emission Limitation:

0.020 lb PE/MMBtu of actual heat input

Applicable Compliance Method:

If required, compliance shall be determined through emission testing performed in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.



e. Emission Limitation:

20% opacity as a 6-minute average, except as provided by rule

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A.

f. Emission Limitation:

20 ppmv SO₂ (dry basis, corrected to 0% excess air), determined daily on a 365 successive calendar day rolling average basis; or

162 ppmv H₂S determined hourly on a 3-hour rolling average basis; and

60 ppmv H₂S determined daily on a 365 successive calendar day rolling average basis

Applicable Compliance Method:

Ongoing compliance shall be demonstrated through the data collected as required in terms d)(1), d)(4), and d)(11), and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60, Subpart Ja.

The permittee shall determine compliance according to the methods required by 40 CFR Part 60, Subpart Ja:

40 CFR 60.104a(i)	SO ₂ performance tests; or
40 CFR 60.104a(j)	H ₂ S performance tests

g. Emission Limitation:

40 ppmv NO_x (dry basis, corrected to 0% excess air) determined daily on a 30-day rolling average basis; or

0.040 lb NO_x/MMBtu (HHV basis) determined daily on a 30-day rolling average basis

Applicable Compliance Method:

Ongoing compliance with the NO_x 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 Recordkeeping Section of this permit, and demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60, Subpart Ja.



The permittee shall determine compliance according to the methods required by 40 CFR Part 60, Subpart Ja:

40 CFR 60.104a(i)	NO _x performance tests
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- (2) Not later than 180 days after initial startup of the continuous NO_x monitoring system, the permittee shall conduct certification tests of the continuous NO_x monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2, and ORC section 3704.03(l). The tests shall also meet the requirements of term f)(4).

Certification of the continuous NO_x monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and ORC section 3704.03(l).

- (3) Not later than 180 days after initial startup of the continuous O₂ monitoring system, the permittee shall conduct certification tests of the continuous O₂ monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 3 and ORC 3704.03(l). The tests shall also meet the requirements of term f)(4).

Certification of the continuous O₂ monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 3 and ORC section 3704.03(l).

Ongoing compliance with the O₂ monitoring requirements 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 Recordkeeping Section of this permit; and demonstration of compliance with the quality assurance/quality control plan, which shall meet all the testing and recertification requirements of 40 CFR Part 60.

- (4) The permittee shall conduct testing and relative accuracy test audits, when required as specified in section f)(1)-(3), in accordance with the following requirements:
 - a. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emission loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance. For relative accuracy test audits required in terms d)(4) – (6), at least 50% of the representative conditions needs to be achieved during the audits.



- b. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 refusal to accept the results of the emission test(s).
 - c. Personnel from the Canton City Health Department, Air Pollution Control Division 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.
 - d. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Canton City Health Department, Air Pollution Control Division within 30 days following the 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 Canton City Health Department, Air Pollution Control Division.
- g) Miscellaneous Requirements
- (1) None.