



1/17/2014

William Patrie
 Marathon Petroleum Company LP - Canton Refinery
 2408 Gambirinus Avenue SW
 Canton, OH 44706

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL
 Facility ID: 1576002006
 Permit Number: P0112479
 Permit Type: Administrative Modification
 County: Stark

Certified Mail

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:

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

Andrew Hall Permit Review/Development Section Ohio EPA, DAPC 50 West Town Street, Suite 700 P.O. Box 1049 Columbus, Ohio 43216-1049	and	Canton City Health Department 420 Market Avenue Canton, OH 44702-1544
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Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Canton City Health Department at (330)489-3385.

Sincerely,

 Michael W. Ahern, Manager
 Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 -Via E-Mail Notification
 Canton; Pennsylvania; West Virginia

PUBLIC NOTICE
Issuance of Draft Air Pollution Permit-To-Install
Marathon Petroleum Company LP - Canton Refinery

Issue Date: 1/17/2014
Permit Number: P0112479
Permit Type: Administrative Modification
Permit Description: Administrative modifications to Permit-to-Install (PTI) 15-076 and PTI 15-649 to incorporate consent decree requirements for the Sulfur Recovery Units and to remove a duplicative monitoring/testing requirement.
Facility ID: 1576002006
Facility Location: Marathon Petroleum Company LP - Canton Refinery
2408 Gambrinus Avenue SW,
Canton, OH 44706
Facility Description: Petroleum Refineries

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the permit # or: Marisa Toppi, Canton City Health Department, 420 Market Avenue, Canton, OH 44702-1544. Ph: (330)489-3385



Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

The Marathon Petroleum Company, LP (MPC) petroleum refinery in Canton, Ohio submitted applications to request certain changes be made to Permit-to-Install (PTI) 15-076 and PTI 15-649 for the Sulfur Recovery Units (SRU), P011 and P016, and Thermal Oxidizer. These changes will incorporate consent decree requirements and remove a duplicative monitoring/testing requirement that is no longer applicable.

The applicable requirements from Consent Decree (CD), Civil Action No. 4:01CV-40119-PVG, that pertain to this particular emissions unit are summarized below:

- conduct root cause analysis for tail gas incidents and acid gas flaring events;
- control sulfur pit emissions consistent with 40 CFR 60, Subpart J; and
- comply with a sulfur shedding plan.

3. Facility Emissions and Attainment Status:

The MPC refinery is located in Stark County, Ohio which is designated as attainment for all criteria pollutants.

These administrative modifications will not change any previously established emissions because no physical or operational changes are occurring to P011 or P016.

4. Source Emissions:

Monitoring and recordkeeping requirements are used to demonstrate compliance with the rolling, 12-hour limitation, the short term combined limit for P011 and P016 and the long term limit for P016.

5. Conclusion:

MPC is not proposing to modify the SRUs either physically or operationally, therefore this permitting action does not trigger major New Source Review (NSR) requirements, best available technology (BAT) requirements pursuant to OAC 3745-31-05(A)(3), or state regulated NSR pollutant or air toxics modeling requirements outlined in Engineering Guide #69 and Ohio Revised Code (ORC) 3704.03(F). This also classifies this permit as an Administrative Modification.

6. Please provide additional notes or comments as necessary:

Recommended terms and conditions were provided by the permittee in the proposed Title V terms and conditions. These terms and conditions were compared to the Consent Decree document, applicable



rule language, and previous PTI terms and conditions. Revisions were made to the permittee recommended terms and conditions to ensure all applicable requirements are clearly stated and included.

P011 was issued an initial installation PTI 15-076 in 1978, which did not establish any emission limits. Subsequent PTOs only stated the NSPS Subpart J limit [250 ppm/12-hr avg] until the 1993 PTO issuance which specified the 21.1 lbs SO₂/hr combined limit [listed per BAT OAC rule 3745-31-05]. The P016 lbs/hr&tpy SO₂ emissions limitations were established in PTI 15-649 when P016 was installed in October, 1991. The hourly average SO₂ emissions limit was established as a combined limit for P011 and P016 in PTI 15-649 [Admin Mod issued 01/14/1993 within testing term only] because the two emission units share a common stack. Generally, only one SRU is used at a time and the other is used as a standby in case the main SRU goes down. MPC only occasionally runs both units at the same time.

Since both permit applications submitted by the facility were requesting the same modifications, the terms and conditions for P011 and P016 were combined into one permit. A long term (tpy) limit was never established for P011 and was not established at this time either.

The operation and maintenance requirements found in Paragraph B.2.were added to the facility-wide requirements at the request of the facility.

It was decided to issue this permit draft in order to establish the CD requirements as federally enforceable terms pursuant to OAC rule 3745-31-05(D), which will allow the CD to be terminated.

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

<u>Pollutant</u>	<u>Tons Per Year</u>
SO ₂	37.9 (P016 only)
SO ₂	92.42 (P011 & P016 combined)



DRAFT

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

for

Marathon Petroleum Company LP - Canton Refinery

Facility ID:	1576002006
Permit Number:	P0112479
Permit Type:	Administrative Modification
Issued:	1/17/2014
Effective:	To be entered upon final issuance



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

Table of Contents

Authorization	1
A. Standard Terms and Conditions	3
1. Federally Enforceable Standard Terms and Conditions	4
2. Severability Clause	4
3. General Requirements	4
4. Monitoring and Related Record Keeping and Reporting Requirements.....	5
5. Scheduled Maintenance/Malfunction Reporting	6
6. Compliance Requirements	6
7. Best Available Technology	7
8. Air Pollution Nuisance	8
9. Reporting Requirements	8
10. Applicability	8
11. Construction of New Sources(s) and Authorization to Install	8
12. Permit-To-Operate Application	9
13. Construction Compliance Certification	10
14. Public Disclosure	10
15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations	10
16. Fees.....	10
17. Permit Transfers	10
18. Risk Management Plans	10
19. Title IV Provisions	10
B. Facility-Wide Terms and Conditions.....	11
C. Emissions Unit Terms and Conditions	14
1. Emissions Unit Group -Sulfur Recovery Units: P011, P016.....	15



Draft Permit-to-Install
Marathon Petroleum Company LP - Canton Refinery
Permit Number: P0112479
Facility ID: 1576002006
Effective Date: To be entered upon final issuance

Authorization

Facility ID: 1576002006
Facility Description: Petroleum Refinery
Application Number(s): M0002019, M0002024
Permit Number: P0112479
Permit Description: Administrative modifications to Permit-to-Install (PTI) 15-076 and PTI 15-649 to incorporate consent decree requirements for the Sulfur Recovery Units and to remove a duplicative monitoring/testing requirement.
Permit Type: Administrative Modification
Permit Fee: \$750.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 1/17/2014
Effective Date: To be entered upon final issuance

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
Interim Director



Authorization (continued)

Permit Number: P0112479
 Permit Description: Administrative modifications to Permit-to-Install (PTI) 15-076 and PTI 15-649 to incorporate consent decree requirements for the Sulfur Recovery Units and to remove a duplicative monitoring/testing requirement.

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

Group Name: Sulfur Recovery Units

Emissions Unit ID:	P011
Company Equipment ID:	No. 2 Sulfur Recovery Unit and Thermal Oxidizer
Superseded Permit Number:	15-076
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P016
Company Equipment ID:	No. 3 Sulfur Recovery Unit
Superseded Permit Number:	15-649
General Permit Category and Type:	Not Applicable



Draft Permit-to-Install
Marathon Petroleum Company LP - Canton Refinery
Permit Number: P0112479
Facility ID: 1576002006
Effective Date: To be entered upon final issuance

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 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



Draft Permit-to-Install
Marathon Petroleum Company LP - Canton Refinery
Permit Number: P0112479
Facility ID: 1576002006
Effective Date: To be entered upon final issuance

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. Per 40 CFR 63.6(e)(1)(i), at all times, including periods of startup, shutdown, and malfunction, the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the permittee reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices.
3. The following terms used in the First Revised Consent Decree, as revised by the First, Second and Third Modifications to the November 2005 First Revised Consent Decree between United States of America et. al. versus Marathon Ashland Petroleum LLC (presently known as Marathon Petroleum Company LP) (Civil Action No. 4:01CV-40119-PVG) shall be defined for purpose of this permit:
 - a) "Acid Gas" shall mean any gas that contains hydrogen sulfide and is generated at a refinery by the regeneration of an amine solution.
 - b) "Acid Gas Flaring Incident" (or "AG Flaring Incident") shall mean the continuous or intermittent combustion of Acid Gas and/or Sour Water Stripper Gas that results in the emission of sulfur dioxide equal to, or in excess of, five-hundred (500) pounds in any twenty-four (24) hour period; provided, however, that if five-hundred (500) pounds or more of sulfur dioxide have been emitted in a twenty-four (24) hour period and flaring continues into subsequent, contiguous, non-overlapping twenty-four (24) hour period(s), each period of which results in emissions equal to, or in excess of five hundred (500) pounds of sulfur dioxide, then only one AG Flaring Incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of flaring within the AG Flaring Incident. An AG Flaring Incident may entail the sulfur dioxide emissions from multiple sources provided that the flaring is associated with on common event.
 - c) "AG Flaring" shall mean the combustion of Acid Gas and/or Sour Water Stripper Gas in an AG Flaring Device.
 - d) "Hydrocarbon Flaring Incident" (or "HC Flaring Incident") shall mean the continuous or intermittent flaring of refinery process gases, except for Acid Gas or Sour Water Stripper Gas or Tail Gas, at a Hydrocarbon Flaring Device that results in the emissions of sulfur dioxide equal to, or greater than five hundred (500) pounds in a 24-hour period; provided, however, an incident which extends for more than a 24-hour period will constitute one (1) Hydrocarbon Flaring Incident. The duration of a Hydrocarbon Flaring Incident shall be determined from the initial commencement until the time of its final termination. A Hydrocarbon Flaring Incident may entail the sulfur dioxide emissions from multiple sources within a 24-hour period provided that the flaring is associated with one common event.
 - e) "Hydrocarbon Flaring" or "HC Flaring" shall mean, for purposes of this permit, the combustion of refinery-generated gases, except for Acid Gas and/or Sour Water Stripper Gas and/or Tail Gas, in a Hydrocarbon Flaring Device.



- f) "Sour Water Stripper Gas" or "SWS Gas" shall mean the gas produced by the process of stripping refinery sour water. For the purposes of this permit, the off-gas from the de-salter (benzene) strippers at the Canton refinery shall not be considered "Sour Water Stripper Gas."
- g) "Tail Gas Incident" shall mean, for the purpose of this permit, combustion of Tail Gas that either is:
 - (1) combusted in a flare and results in 500 pounds of SO₂ emissions in any 24 hour period; or
 - (2) combusted in a thermal incinerator and results in 500 pounds of SO₂ emissions in any 24-hour period. Only those time periods which are in excess of SO₂ concentration of 250 ppm (rolling twelve-hour average) shall be used to determine the amount of excess SO₂ emissions from the incinerator.

The permittee shall use engineering judgment and/or other monitoring data during periods in which the SO₂ continuous emission analyzer has exceeded the range of the instrument or is out of service.

- h) "Tail Gas Unit" ("TGU") shall mean a control system utilizing a technology for reducing emissions of sulfur compounds from a Sulfur Recovery Plan.
- i) "Upstream Process Units" shall mean all amine contactors, amine scrubbers, and sour water strippers at the refinery, as well as all process units at the refinery that produce gaseous or aqueous waste streams that are processed at amine contactors, amine scrubbers, or sour water strippers.



Draft Permit-to-Install
Marathon Petroleum Company LP - Canton Refinery
Permit Number: P0112479
Facility ID: 1576002006
Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions



1. Emissions Unit Group -Sulfur Recovery Units: P011, P016

EU ID	Operations, Property and/or Equipment Description
P011	No. 2 Sulfur Recovery Unit 4-34 and Thermal Oxidizer 4-34 Claus Train #34
P016	No. 3 Sulfur Recovery Unit 4-38 and Thermal Oxidizer 4-34 Claus Train #38

The emission units consist of a Claus Sulfur Recover Unit (SRU) in a series with a SCOT unit, which is used to convert sulfur dioxide (SO₂) to hydrogen sulfide (H₂S) for further processing in the SRU. Acid gases from refinery processes are processed in the SRU to recover the sulfur. The SRU generates some SO₂ which is treated in the same SCOT unit. The SCOT unit converts the SO₂ from the SRU into H₂S which is recycled back to the SRU. Both SRU's that are part of emission units P011 and P016 discharge to either SCOT 1 or SCOT 2 unit which, in turn, vents to a thermal oxidizer for conversion of the residual H₂S to SO₂ prior to discharge into the ambient air. The thermal oxidizer is rated at 21 mmBtu/hr and burns only natural gas for fuel.

- 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)	Sulfur dioxide (SO ₂) emissions shall not exceed 21.1 pounds per hour (lbs/hr) (combined limit for both P011 and P016) as a rolling, 12-hour average For P016 only: SO ₂ emissions shall not exceed 8.66 lbs/hr SO ₂ emissions shall not exceed 37.9 tons per year (tpy)
b.	OAC 3745-18-82(A)(3)	See b)(2)a.
c.	40 CFR 52.1881(b)(9)(ix)(D)	See b)(2)b.
d.	40 CFR Part 63, Subpart A (40 CFR 63.1-16)	General Provisions
e.	40 CFR Part 63, Subpart UUU (40 CFR 63.1560-1579)	See b)(2)d. through g.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	See b)(2)c.	
f.	40 CFR 60, Subpart A (40 CFR 60.1-19)	General Provisions
g.	40 CFR Part 60, Subpart J (40 CFR 60.100-109) See b)(2)h.	SO ₂ emissions shall not exceed 250 parts per million by volume on a dry basis (ppmvd) as a rolling, 12-hour average at 0% excess air [60.104(a)(2)(i)] See b)(2)i. and j.
h.	OAC rule 3745-31-05(D) [Limitations pursuant to Consent Decree (First Modification to the November 2005 First Revised Consent Decree), United States v. Marathon Ashland Petroleum LLC, (Civil Action No. 4:01-CV-40119-PVG), which was lodged with the United States District Court for the Eastern District of Michigan on March 31, 2008]	See b)(2)i. through k. and c)(3).

(2) Additional Terms and Conditions

- a. The emission limitation that SO₂ from any stack shall not exceed 80.0 lbs of SO₂ per ton of actual process weight input, as specified in this rule, is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- b. The emission limitation that SO₂ from any stack at this facility shall not exceed 2.00 lbs of SO₂ per 100 lbs of sulfur processed for sulfur recovery plants, as specified in this rule, is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- c. In accordance with 40 CFR 60.100(a) the affected facility is defined as Claus sulfur recovery plants with design capacity for sulfur feed of >20 long tons per day (LTD) for which construction or modification commenced after October 4, 1976 and before May 14, 2007 in a petroleum refinery.
- d. In accordance with 40 CFR 63.1568(a)(1), P011 and P016 comply with 40 CFR 63, Subpart UUU through compliance with the NSPS SO₂ emission limits in 40 CFR 60.104(a)(2)(i).



- e. In accordance with 40 CFR 63.1570(a), the permittee must be in compliance with all of the non-opacity standards in this subpart during the times specified in 40 CFR Part 63.6(f)(1).
- f. In accordance with 40 CFR 63.1570(c) and (g), the permittee must always operate and maintain the affected emissions unit, including air pollution control and monitoring equipment, according to the provisions in 40 CFR Part 63.6(e)(1)(i). Deviations that occur during a period of startup, shutdown, or malfunction are not violations if the permittee can demonstrate that the source was operating in accordance with 40 CFR 63.6(e)(1).
- g. In accordance with 40 CFR 63.1569(a)(1)(iv), the permittee shall vent the SRU bypass lines to a flare system, which is operated and maintained in accordance with 40 CFR Part 63.11(b).
- h. In accordance with 40 CFR 63.1562(b)(3)-(4) the affected facility is defined as the process vent or group of process vents on Claus or other types of sulfur recovery plant units or the tail gas treatment units serving sulfur recovery plants, that are associated with sulfur recovery and each bypass line serving a sulfur recovery unit.
- i. The permittee shall maintain a summary of a plan, implemented for enhanced maintenance and operation of its Sulfur Recovery Plant, the Tail Gas Units (TGU(s)), any supplemental control devices, and the appropriate Upstream Process Units ("PMO Plan"). The PMO Plan shall be a compilation of the permittee's approaches for exercising good air pollution control practices for minimizing SO₂ emissions. The PMO plan shall provide for continuous operation of the Sulfur Recovery Plant between scheduled maintenance turnarounds with minimization of emissions from each Sulfur Recovery Plant. The PMO Plan shall include, but not be limited to, sulfur shedding procedures, new startup and shutdown procedures, emergency procedures and schedules to coordinate maintenance turnarounds of its Sulfur Recovery Plant Claus trains, TGU, and any supplemental control device to coincide with scheduled turnarounds of major Upstream Process Units. The PMO Plan shall have as a goal the elimination of acid gas flaring. The permittee shall comply with the PMO Plan at all times, including periods of startup, shutdown, and malfunction of the Sulfur Recovery Plant.
- j. The permittee shall comply with the following requirements for investigative and corrective action procedures as they relate to Acid Gas flaring incidents, tail gas incidents, and hydrocarbon flaring incidents.
 - i. The permittee shall investigate the root cause and all contributing causes of all Acid Gas Flaring Incidents, Tail Gas Incidents, and Hydrocarbon Flaring incidents. The permittee shall take reasonable steps to correct the conditions that have caused or contributed to such incidents, and to minimize the number and duration of such incidents. The permittee shall evaluate whether Acid Gas Flaring Incidents, Tail Gas Incidents, and Hydrocarbon Flaring incidents are due to malfunctions.



- ii. In response to any Acid Gas Flaring Incident, Tail Gas Incident, or Hydrocarbon Flaring incident, the permittee shall take, as expeditiously as practicable, such interim and/or long term corrective actions, if any, as are consistent with good engineering practice to minimize the likelihood of a recurrence of the root cause and all contributing causes of the Acid Gas Flaring Incident, Tail Gas Incident, or Hydrocarbon Flaring incident.
- iii. As it relates to Hydrocarbon Flaring incidents, the purpose of these requirements is to ensure the flare system is operated in a manner consistent with good air pollution control practices (40 CFR 60.11(d)) and to ensure that Hydrocarbon Flaring resulting from startup, shutdown, malfunction, or process upset is not subject to the emission limitations, monitoring, or other requirements for refinery fuel gas found in 40 CFR 60.100-60.109.
- k. The permittee shall manage all Sulfur Recovery Plant sulfur pit emissions so that sulfur pit emissions to the atmosphere are eliminated or included and monitored as part of the applicable sulfur recovery plant tail gas emissions except during periods of startup, shutdown, malfunction, or process upset unless the emissions are subject to monitoring.

c) Operational Restrictions

- (1) In accordance with 40 CFR 63.1568(c)(2) and 63.1569(c)(2), the permittee shall operate at all times according to the procedures in the operation, maintenance, and monitoring plan developed pursuant to 40 CFR 63.1574(f).
- (2) In accordance with 40 CFR 63.1570(d), during periods of startup, shutdown, and malfunction, the permittee must operate in accordance with the startup, shutdown, and malfunction plan (SSMP).
- (3) The permittee shall operate and maintain a flare system, in accordance with 40 CFR Part 63.11(b), for use during emergency or upset conditions experienced during the operation of the SRU.

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 J.

40 CFR 60.105(a)(5)	Install, operate, maintain and operate an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of SO ₂ emissions and an oxygen monitor
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- (2) The permittee shall operate and maintain a continuous emissions monitoring system (CEMS) to continuously monitor and record SO₂ 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.



- a. The permittee shall maintain a written quality assurance/quality control plan for the continuous SO₂ monitoring system, designed to ensure continuous valid and representative readings of SO₂ 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 logbook dedicated to the continuous 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. 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 SO₂ 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.
- d. The permittee shall maintain records of all data obtained by the continuous SO₂ monitoring system including, but not limited to:
- i. emissions of SO₂ in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
 - ii. emissions of SO₂ in pounds per hour and in ppmvd as a rolling, 12-hour average at 0% excess air;
 - iii. results of quarterly cylinder gas audits;
 - iv. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
 - v. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
 - vi. hours of operation of the emissions unit, continuous SO₂ 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 SO₂ 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 SO₂ 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.).

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 operate and maintain a continuous emissions monitoring system (CEMS) 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.
 - a. The permittee shall maintain a written quality assurance/quality control plan for the continuous O₂ monitoring system, designed to ensure continuous valid and representative readings of O₂ 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 logbook dedicated to the continuous 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. 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 O₂ monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 3. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.
 - d. The permittee shall maintain records of all data obtained by the continuous O₂ monitoring system including, but not limited to:
 - i. the percent O₂ with each cycle time of the analyzer, with no resolution less than one data point per minute required;



- 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);
- v. hours of operation of the emissions unit, continuous O₂ monitoring system;
- vi. the date, time, and hours of operation of the emissions unit without the continuous O₂ monitoring system;
- vii. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous O₂ 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.).

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.

- (4) The permittee shall operate and maintain, in accordance with manufacturer's recommendations, flow measuring devices to quantify the emissions routed from the SRU to emission unit P003 (flare). Data collection shall commence with the activation of the relief valve and continue until the release has ceased. The type and specification of flow measuring devices shall be subject to approval by the Canton City Health Department, Air Pollution Control Division upon request.
- (5) The permittee shall install, operate, and maintain an alarm system on the SRU which will immediately notify plant operators when a hydrogen sulfide venting situation develops. The alarm shall notify plant personnel that H₂S is being vented to the flare. When an H₂S venting event occurs, plant personnel shall notify the shift supervisor. Shift supervisors (or other plant personnel) shall take immediate action to eliminate the venting of H₂S. The type and specification of H₂S alarm systems shall be subject to approval by the Canton City Health Department, Air Pollution Control Division upon request and shall be operated and maintained in accordance with the manufacturer's recommendations.
- (6) The permittee shall comply with the applicable monitoring and recordkeeping requirements pursuant to 40 CFR Part 63, Subpart UUU:

40 CFR 63.1568(a)(3); 40 CFR 63.1568(c)(2); 40 CFR 63.1574(f); 40 CFR 63.1576(e)	Operation, maintenance, and monitoring plan
40 CFR 63.1568(b)(1); 40 CFR 63.1572(a) and (d)	Install, operate, and maintain a continuous emissions monitoring system
40 CFR 63.1570(d)	Startup, shutdown, malfunction plan



40 CFR 63.1568(c)(1); 40 CFR 63.1576(a)-(b), (d), (f)-(i)	Record keeping requirements
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(7) A record of the Acid Gas Flaring Incidents, Tail Gas Flaring Incidents, and Hydrocarbon Flaring incidents (“flaring incident”) investigations, as required in b)(2)j. above, shall be made and include the following:

- a. the date and time that the flaring incident started and ended. To the extent that the flaring incident involved multiple releases either within a twenty-four (24) hour period or within subsequent, contiguous, non-overlapping twenty-four (24) hour periods, the permittee shall set forth the starting and ending dates and times of each release;
- b. an estimate of the quantity of sulfur dioxide that was emitted and the calculations that were used to determine that quantity, which shall follow the approach detailed in terms f)(2)-(4) below. This shall include an explanation of data used in the calculation and of the basis for any estimates of missing data points (if applicable);
- c. the steps, if any, that the permittee took to limit the duration and/or quantity of sulfur dioxide emissions associated with the flaring incident;
- d. a detailed analysis that sets forth the root cause and all contributing causes of that flaring incident, to the extent determinable.
- e. An analysis of the measures, if any, that are available to reduce the likelihood of a recurrence of a flaring incident resulting from the same root cause or contributing causes in the future. The analysis shall discuss the alternatives, if any, that are available, the probable effectiveness and cost of the alternatives, and whether or not an outside consultant should be retained to assist in the analysis. Possible design, operation and maintenance changes shall be evaluated.
- f. If the permittee concludes that corrective action(s) is (are) required per b)(2)j.ii. above, the record shall include a description of the action(s) and, if not already completed, a schedule for its (their) implementation, including proposed commencement and completion dates. If the permittee concludes that corrective action is not required, the record shall explain the basis for that conclusion.

e) Reporting Requirements

(1) The permittee shall notify the Canton City Health Department, Air Pollution Control Division as soon as possible of any H₂S venting to the flare from this emissions unit during normal business hours. Hydrogen sulfide venting at all other times shall be reported to the Canton City Health Department, Air Pollution Control Division at the first opportunity during normal business hours. If the venting of H₂S poses a health risk, the shift supervisor (or other plan personnel) on duty shall report the venting to the Ohio EPA emergency response division.



- (2) The permittee shall report any flow measurement data accumulated during the quarter from the flow measuring device used to quantify emissions routed from the SRU to the flare (P003).
- (3) The permittee shall comply with the applicable reporting requirements pursuant to 40 CFR Part 60, Subpart J and 40 CFR Part 60, Subpart A:

40 CFR 60.105(e)	Excess emissions reports
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- (4) The permittee shall comply with the applicable reporting requirements pursuant to 40 CFR Part 63, UUU:

40 CFR 63.1570(f), (g), and 63.1575(a)	Semiannual compliance report
40 CFR 63.1575(b)(3)-(5)	Compliance report due dates
40 CFR 63.1575(c)-(h)	Compliance report contents

- (5) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO₂ monitoring system:

- a. Pursuant to the monitoring, recordkeeping, 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 Canton City Health Department, Air Pollution Control Division, documenting all instances of SO₂ 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 following:
 - i. the date of the exceedance;
 - ii. the commencement and completion times of the exceedance;
 - iii. the duration and magnitude of each exceedance; as well as,
 - iv. 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 SO₂ 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 SO₂ 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 SO₂ monitor out-of-control and the compliant results following any corrective actions;
 - x. the date, time, and duration of any/each malfunction** of the continuous SO₂ monitoring system, emission unit, and/or control equipment;
 - xi. the date, time, and duration of any downtime** of the continuous SO₂ 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 even 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 and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

- (6) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous O₂ monitoring system:
 - a. Pursuant to the monitoring, recordkeeping, 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 Canton City Health Department, Air Pollution Control Division documenting all instances of continuous O₂ monitoring system downtime and malfunction while the emissions unit was online.



- 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 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 (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 if there is an exceedance of any applicable limit

- (7) The permittee shall submit a summary of all flaring incidents and the actions taken on a semi-annual basis within the semi-annual report. This is in lieu of reporting on an incident-by-incident basis.
- (8) Modifications related to minimizing Acid Gas Flaring and/or SO₂ emissions made by the permittee to the Plan required by term b)(2)i. above shall be summarized in an annual submittal to the Canton City Health Department, Air Pollution Control Division, by January 31st of the following year.



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:

250 ppmv of SO₂ as a rolling, 12-hour average

8.66 lbs/hr of SO₂ (P016 only)

21.1 lbs/hr of SO₂ (combined limit for both P011 and P016)

Applicable Compliance Method:

The lb/hr emission limitations were established using the following methodology:

i. For P016, the following set of equations and data were used:

As provided by the permittee, the recovery efficiency was calculated by multiplying the efficiency of the SRU by the efficiency of the SCOT and thermal oxidizer.

$$\text{Sulfur Recovery Efficiency} = (1 - [(1 - 0.92) * (1 - 0.99)]) = 0.9992$$

The SRU feed was calculated by dividing the sulfur recovery by the sulfur recovery efficiency.

$$\text{SRU Feed} = \frac{58 \text{ LTPD}}{0.992} = 58.0464 \text{ LTPD of Sulfur}$$

Therefore, the sulfur emissions were calculated by subtracting the sulfur recovery from the SRU feed.

$$\text{Sulfur Emission} = 58.0464 \text{ LTPD} - 58 \text{ LTPD} = 0.0464 \text{ LTPD of Sulfur}$$

The sulfur emissions were then converted to lb/hr using the following calculation:

$$\frac{0.0464 \text{ long ton}}{\text{day}} * \frac{2240 \text{ lbs}}{1 \text{ long ton}} * \frac{1 \text{ day}}{24 \text{ hrs}} * \frac{64.063 \text{ lbs SO}_2}{32.064 \text{ lbs S}} = 8.66 \frac{\text{lbs}}{\text{hr}} \text{SO}_2$$

Where:

92% = SRU efficiency

99% = SCOT and thermal oxidizer efficiency

58 LTPD = Sulfur recovery and maximum capacity of P016



64.063 lbs SO₂ = Atomic mass of sulfur dioxide

32.064 lbs S = Atomic mass of sulfur

- ii. For P011, the following set of equations and data were used to estimate hourly emissions:

As provided by the permittee, the ppm emission limitation was converted to lbs/hr for P011 using the following calculation for the purposes of establishing a combined limit for P011 and P016.

$$\frac{250 \text{ ppm}}{1,000,000} * \frac{0.0749 \text{ lb}}{\text{ft}^3} * \frac{5,181.60 \text{ ft}^3}{\text{min}} * \frac{60 \text{ min}}{1 \text{ hr}} * \frac{64 \text{ g SO}_2}{29.95 \text{ g Air}} = 12.44 \frac{\text{lb}}{\text{hr}}$$

Where:

$$\frac{0.0749 \text{ lb}}{\text{ft}^3} = \text{Density of air}$$

$$\frac{5,181.60 \text{ ft}^3}{\text{min}} = \text{Volumetric flow rate as measured by stack testing data supplied by permittee and demonstrated by recordkeeping}$$

64 g = Molecular weight of SO₂

29.95 g = Molecular weight of air

- iii. The combined lb/hr emission limitation was established by adding together the lb/hr values above for P011 and P016, as follows,

$$12.44 \frac{\text{lbs}}{\text{hr}} + 8.66 \frac{\text{lbs}}{\text{hr}} = 21.1 \frac{\text{lbs}}{\text{hr}} \text{ SO}_2$$

The monitoring and recordkeeping requirements in sections d)(1)-(3) shall be used to demonstrate compliance with the SO₂ emissions limitations. If required, compliance shall also be demonstrated based upon the emission testing methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 6.

b. Emission Limitation:

37.9 tpy of SO₂ (P016 only)

Applicable Compliance Method:

This emission limitation was established by multiplying the 8.66 lbs/hr emission limitation by the maximum hours per year (8760) then dividing by 2000 lbs/ton, as shown below.

$$\frac{8.66 \text{ lbs}}{\text{hr}} * \frac{8,760 \text{ hrs}}{\text{yr}} * \frac{1 \text{ ton}}{2,000 \text{ lbs}} = 37.9 \frac{\text{tons}}{\text{yr}}$$



Compliance shall be demonstrated by calculating a sum of the SO₂ emission rate, in lbs/hr, from the CEMS for each hour of operation during the year, and then dividing the total annual pounds of SO₂ by 2,000 lbs/ton.

- (2) The quantity of SO₂ emissions resulting from AG Flaring shall be calculated using the following formula:

$$Tons\ of\ SO_2 = FR * TD * ConcH_2S * (8.44 * 10^{-5})$$

Where:

FR = Average flow rate to flaring device(s) during flaring (scf/hr)

TD = Total duration of flaring (hrs)

ConcH₂S = Average concentration of H₂S in gas during flaring (or immediately prior to flaring if all gas is being flared) expressed as a volume fraction (scf H₂S/scf gas)

$$8.44 * 10^{-5} = \frac{lb\ mole\ H_2S}{379\ scf\ H_2S} * \frac{64\ lbs\ SO_2}{lb\ mole\ H_2S} * \frac{1\ ton}{2,000\ lbs}$$

The quantity of SO₂ emitted shall be rounded to one decimal point. For purposes of determining the occurrence of, or the total quantity of SO₂ emissions resulting from, an AG Flaring Incident that is comprised of intermittent AG Flaring, the quantity of SO₂ emitted shall be equal to the sum of the quantities of SO₂ flared during each such period of intermittent AG Flaring.

- (3) The rate of SO₂ emissions resulting from AG Flaring and HC Flaring shall be calculated using the following formula:

$$ER = FR * ConcH_2S * 0.169$$

Where:

ER = Emission rate (lbs SO₂/hr)

$$0.169 = \frac{lb\ mole\ H_2S}{379\ scf\ H_2S} * \frac{1.0\ lb\ mole\ SO_2}{1\ lb\ mole\ H_2S} * \frac{64\ lb\ SO_2}{1.0\ lb\ mole\ SO_2}$$

The emission rate shall be rounded to one decimal point. The flow of gas to the AG Flaring and HC Flaring Device(s) (“FR”) shall be measured by the relevant flow meter or reliable flow estimation parameters. H₂S concentration (“ConcH₂S”) shall be determined from the SRU feed gas analyzer or from knowledge of the sulfur content of the process gas being flared. In the event that either of these data points is unavailable or inaccurate, the missing data point(s) shall be estimated according to best engineering judgment.



- (4) The quantity of SO₂ emissions resulting from a Tail Gas Incident shall be calculated by one of the following methods, based on the type of the event:
- a. If the Tail Gas Incident is combusted in a flare the SO₂ emissions are calculated using the methods outlined in Paragraph d)(7)f. or d)(7)g.; or
 - b. If the Tail Gas Incident is an event exceeding the 250 ppmvd NSPS limit, from a monitored Sulfur Recover Plant incinerator or stack, then the following formula applies:

$$ER_{TGI} = \sum_{i=1}^{TD_{TGI}} [FR_{Inc}]_i [Conc. SO_2 - 250]_i [0.169 * 10^{-6}] \frac{20.9 - \%O_2}{[20.9]_i}$$

Where:

ER_{TGI} = Emissions from Tail Gas at the Sulfur Recover Plant incinerator or stack, SO₂lb over a twenty-four (24) hour period

TD_{TGI} = Total duration (number of hours) when the incinerator or stack CEMS exceeded 250 ppmvd SO₂ corrected to 0% O₂ on a rolling twelve (12) hour average, in each twenty-four (24) hour period of the incident

i = Each hourly average

FR_{Inc} = Incinerator or stack exhaust gas flow rate (scf/hr, dry basis) (actual stack monitor data or engineering estimate based on the acid gas feed rate to the Sulfur Recovery Plant) for each hour of the incident

$Conc. SO_2$ = Each actual twelve (12) hour rolling average SO₂ concentration (CEMS data) that is greater than 250 ppm in the incinerator or stack exhaust gas, ppmvd corrected or 0% O₂, for each hour of the incident

$\% O_2$ = O₂ concentration (CEMS data) in the incinerator or stack exhaust gas in volume % on dry basis for each hour of the incident

$$0.169 * 10^{-6} = \frac{lb \text{ mole of } SO_2}{379 SO_2} * \frac{64 lbs SO_2}{lb \text{ mole } SO_2} * [1 * 10^{-6}]$$

Standard conditions = 60 degree F; 14.7 lb_{force}/sq. in. absolute

In the event the concentration SO₂ data point is inaccurate or not available or a flow meter for FR_{inc} does not exist or is inoperable, then estimates will be used based on best engineering judgment.

g) Miscellaneous Requirements

- (1) None.