



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

10/21/2015

Mr. James Roberts
Harrison Hub Fractionation Plant
10 East Main Street
Salineville, OH 43945

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0634005028
Permit Number: P0119142
Permit Type: Initial Installation
County: Harrison

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	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 Ohio EPA DAPC, Southeast District Office at (740)385-8501 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



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

Cc: U.S. EPA
Ohio EPA-SEDO; Pennsylvania; West Virginia



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
Harrison Hub Fractionation Plant**

Facility ID:	0634005028
Permit Number:	P0119142
Permit Type:	Initial Installation
Issued:	10/21/2015
Effective:	10/21/2015



Division of Air Pollution Control
Permit-to-Install
for
Harrison Hub Fractionation Plant

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Final Permit-to-Install
Harrison Hub Fractionation Plant
Permit Number: P0119142
Facility ID: 0634005028
Effective Date: 10/21/2015

Authorization

Facility ID: 0634005028
Facility Description: Natural gas liquids fractionation facility
Application Number(s): A0053252
Permit Number: P0119142
Permit Description: Initial Installation of B002 Stabilizer Hot Oil Heater and J002 Truck Loading System at the Harrison Hub Fractionation Plant.
Permit Type: Initial Installation
Permit Fee: \$600.00
Issue Date: 10/21/2015
Effective Date: 10/21/2015

This document constitutes issuance to:

Harrison Hub Fractionation Plant
37905 Crimm Rd.
Scio, OH 43988

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

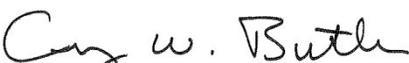
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southeast District Office
2195 Front Street
Logan, OH 43138
(740)385-8501

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
Harrison Hub Fractionation Plant
Permit Number: P0119142
Facility ID: 0634005028
Effective Date: 10/21/2015

Authorization (continued)

Permit Number: P0119142

Permit Description: Initial Installation of B002 Stabilizer Hot Oil Heater and J002 Truck Loading System at the Harrison Hub Fractionation Plant.

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

Emissions Unit ID:	B002
Company Equipment ID:	Stabilizer Hot Oil Heater
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	J002
Company Equipment ID:	Truck Loading System
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Final Permit-to-Install
Harrison Hub Fractionation Plant
Permit Number: P0119142
Facility ID: 0634005028
Effective Date: 10/21/2015

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 Ohio EPA DAPC, Southeast District Office.

- (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 Ohio EPA DAPC, Southeast District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the Ohio EPA DAPC, Southeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

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

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

6. Compliance Requirements

- a) 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 Ohio EPA DAPC, Southeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

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

8. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Southeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Southeast District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted 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
Harrison Hub Fractionation Plant
Permit Number: P0119142
Facility ID: 0634005028
Effective Date: 10/21/2015

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) B.3.
2. Emissions unit B002, contained in this permit, is subject to 40 CFR Part 60, Subpart Dc. Emissions units J002, contained in this permit, is subject to 40 CFR Part 60, Subpart OOOO and portions of 40 CFR Part 60, Subpart VVa. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulation (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the appropriate Ohio EPA District office or local air agency.
1. Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute" in ORC 3704.03(F)(4)(b) was not necessary for this project, even though the maximum annual emission rate for hexane, an air toxic air contaminant as defined in OAC rule 3745-114-01, will be greater than 1.0 ton per year (6.58 tons per year). The majority of the hexane (1.195 and 3.832 tons per year) is emitted from B001, the natural gas fired hot oil heater, and the combined emissions from J001, Natural gas loading rack and J002, Truck loading rack, (each loading rack is controlled by a flare), and those emissions do not need to be considered pursuant to DAPC's Engineering Guide 70, Question 11.
2. If applicable, the permittee shall 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") no later than the date on which a regulated substance is first present above a threshold quantity in a process.
3. Air contaminant sources that qualify as de minimis under OAC rule 3745-15-05, or are exempt under OAC rule 3745-31-03(A)(1) or (4) are not subject to emission standards established within this permit. Although this permit does not apply to de minimis or exempt sources, emissions from de minimis or exempt sources must be included in the total potential to emit (PTE) calculations for this permit. PTE calculations should include sources such as:
 - a) Truck Loading/Unloading System Flare (de minimis per OAC rule 3745-15-05).



Final Permit-to-Install
Harrison Hub Fractionation Plant
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C. Emissions Unit Terms and Conditions

1. B002, Stabilizer Hot Oil Heater

Operations, Property and/or Equipment Description:

Stabilizer Hot Oil Heater – Natural gas fired.

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) See b)(1)c.

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) and OAC rule 3745-31-05(A)(3) June 30, 2008	Carbon monoxide (CO) emissions shall not exceed 0.94 ton per month averaged over a twelve-month rolling period.
b.	OAC rule 3745-31-05(A)(3) June 30, 2008	Install a burner designed to meet 0.02 lb. of particulate emissions (PE) per mmBtu heat input. Nitrogen oxide (NOx) emissions shall not exceed 0.68 ton per month averaged over a twelve-month rolling period. Volatile organic compounds (VOC) emissions shall not exceed 0.22 ton per month averaged over a twelve-month rolling period. See b)(2)a.
c.	OAC rule 3745-31-05(A)(3)(a)(ii) June 30, 2008	The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE, sulfur dioxide (SO ₂), NO _x , and VOC emissions from this air contaminant source since the potential to emit for PE, SO ₂ , NO _x , and VOC emissions is less than 10 tons/yr. See b)(2)b.
d.	OAC rule 3745-17-10(B)(1)	0.02 lb. of PE per mmBtu of actual heat input.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
f.	40 CFR Part, 60, Subpart Dc	See b)(2)c.
g.	OAC rule 3745-18-06(A)	Exempt during any calendar day in which natural gas is the only fuel burned.
h.	OAC rule 3745-110-03	Exempt because NOx emissions less than 25 tons per year.

(2) Additional Terms and Conditions

- a. This 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) into the Ohio State Implementation Plan (SIP).

[OAC rule 3745-31-05(A)(3)]

- b. 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 the Ohio SIP.

[OAC rule 3745-31-05(A)(3)(a)(ii)]

- c. There are no specific additional requirements under 40 CFR Part 60 Subpart Dc since this emissions unit employs only natural gas as fuel.

c) Operational Restrictions

- (1) The permittee shall burn only natural gas as defined in 40 CFR 63.761 in this emissions unit.
- (2) The permittee shall maintain this process heater in accordance with the manufacturer's specifications and maintenance guidance in order to assure compliance with the required above listed design emission rate of PE, NOx, and VOC.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas in this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) The permittee shall maintain all manufacturer's specifications and maintenance guidance, along with, records on all maintenance performed on the process heater in accordance with the manufacturer's specifications and maintenance guidance in order to assure compliance with the required above listed design emission rate of PE.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. that identify each day when a fuel other than natural gas was burned in this emissions unit.

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

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

f) Testing Requirements

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

- a. Emission Limitation:

0.02 lb. of PE per mmBtu of actual heat input.

Applicable Compliance Method:

If required, the permittee shall conduct or have conducted a compliance stack test in order to verify with the PE limitation. The compliance stack test shall be determined in accordance with the Methods 1 - 5 of 40 CFR, Part 60, Appendix A.

- b. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20 percent opacity as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9.

- c. Emission Limitation:

CO emissions shall not exceed 0.94 ton per month averaged over a twelve-month rolling period.



Applicable Compliance Method:

CO emission limitation was established using 0.055 lb. per mmBtu heat input value times 46.9 mmBtu per hour capacity of the heater times 8760 hours per year divided by 2000 lbs. per ton and then divided by 12.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

d. Emission Limitation:

NOx emissions shall not exceed 0.68 ton per month averaged over a twelve-month rolling period.

Applicable Compliance Method:

NOx emission limitation was established using 0.04 lb. per mmBtu heat input value times 46.9 mmBtu per hour capacity of the heater times 8760 hours per year divided by 2000 lbs. per ton and then divided by 12.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

e. Emission Limitation:

VOC emissions shall not exceed 0.22 ton per month averaged over a twelve-month rolling period.

Applicable Compliance Method:

VOC emission limitation was established using 0.013 lb. per mmBtu heat input value times 46.9 mmBtu per hour capacity of the heater times 8760 hours per year divided by 2000 lbs. per ton and then divided by 12.

If required, the permittee shall demonstrate compliance with the lb/mmBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 25.

g) Miscellaneous Requirements

- (1) None.

2. J002, Truck Loading/Unloading System

Operations, Property and/or Equipment Description:

Trucked condensate loading/unloading system including control flare (Truck Loading/Unloading System Flare) with a design control efficiency of at least 98% for VOC emissions. The truck loading/unloading system uses a closed vapor balance system to unload condensate from trucks to the on-site stabilizer feed tank. This system also loads stabilized condensate product from the on-site storage tanks into trucks. As stabilized condensate is stored in a floating roof tank, the loading operation cannot vapor balance with the storage tank. These emissions are controlled by the Truck Loading/Unloading System Flare with at least 98% VOC design destruction efficiency. For purposes of Potential to Emit, the loading vapors controlled by the Truck Loading/Unloading System flare will be combined with those controlled at J002 (Railcar and Truck Loading System) to create a plant wide emission limit. For purposes of Potential to Emit, the loading vapors controlled by the Truck Loading/Unloading System flare will be combined with those controlled at J001 (Railcar and Truck Loading System).

- 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) See b)(1)c.
- 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) and OAC rule 3745-31-05(A)(3), as effective June 30, 2008	Use of a flare, with a design control efficiency of at least 98% for VOC emissions, to minimize and/or eliminate VOC emissions while this emissions unit is processing material. The combined carbon monoxide (CO) emissions from this emission unit and J001 (Railcar and Truck Loading System) shall not exceed 3.05 tons per month averaged over a twelve-month rolling period.
b.	OAC rule 3745-31-05(A)(3), as effective June 30, 2008	The combined nitrogen oxide (NOx) emissions from this emission unit and J001 (Railcar and Truck Loading System) shall not exceed 0.56 ton per month average over a twelve-month rolling period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		The combined particulate emissions (PE) from this emission unit and J001 (Railcar and Truck Loading System) shall not exceed 0.061 ton per month averaged over a twelve-month rolling period. See b)(2)b.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective June 30, 2008	The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the NOx emissions and PE from this air contaminant source since the potential to emit for NOx emissions and PE is less than 10 tons/yr. See b)(2)c.
d.	40 CFR Part 60, Subparts OOOO and VVa (40 CFR 60.5360–60.5430, 40 CFR 60.482-2a, 60.482-4a–60.482-11a) [In accordance with 40 CFR 60.5365(f), this emissions unit consists of equipment within a process unit at an onshore natural gas processing plant constructed after August 23, 2011.]	See b)(2)d.
e.	OAC rule 3745-31-05(F)	The combined VOC emissions from this emission unit and J001 (Railcar and Truck Loading System) shall not exceed 8.06 ton per month average over a twelve-month rolling period. See b)(2)f. and c)(1).

(2) Additional Terms and Conditions

- a. BAT for this emissions unit has been determined to be use of a flare, with a design control efficiency of at least 98% for VOC emissions, to minimize and/or eliminate VOC emissions while this emissions unit is processing material.
- b. This 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) into the Ohio State Implementation Plan (SIP).

[OAC rule 3745-31-05(A)(3)]

- c. 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 the Ohio SIP.

[OAC rule 3745-31-05(A)(3)(a)(ii)]

- d. Fugitive emissions from this emissions unit are accounted for under emissions unit P801 (permit number P0117878) and are subject to the requirements for closed vent systems for loading racks and associated equipment such as pumps, compressors, pressure relief devices, valves and flanges under 40 CFR Part 60, subparts OOOO and VVa 60.482-2a, 60.482-4a–60.482-11a. as set forth in P801.
- e. The emission limitations established for this emissions unit do not include emissions that would result from upset/emergency situations. The emissions resulting from upset/emergency conditions would be reported in accordance with OAC rule 3745-15-06.
- f. This permit establishes the following legally and practically enforceable emission limitations for the purpose of limiting potential to emit (PTE). The legally and practically enforceable emission limitations are voluntary restrictions established under OAC rule 3745-31-05(F) and are based on the following:
- i. Controlled: 8.06 ton per month average over a twelve-month rolling period.

The legally and practically enforceable emission limitations are a voluntary restriction established under OAC rule 3745-31-05(F) and are based on the operational restrictions contained in section c)(1).

c) Operational Restrictions

- (1) The permittee shall install and operate a flare for the control of VOC emissions whenever this emissions unit is in operation, including blowdown of pressurized fuels, and shall maintain the flare in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.
- (2) In the event the flare is not operating in accordance with the manufacturer's recommendations, instructions, or operating manual, with any modifications deemed necessary by the permittee, the control device shall be expeditiously repaired or otherwise returned to these documented operating conditions.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain records demonstrating any occurrence when emissions from this emissions unit was not vented to an operating flare prior being emitted to the ambient air. These records shall include the following:
- a. The date and time of the occurrence;

- b. The duration of the occurrence, in hours;
 - c. The cause of the occurrence; and
 - d. The proactive and corrective steps taken to minimize the occurrence and to prevent future occurrences.
- (2) The permittee shall maintain records demonstrating any maintenance that is done to this emissions unit and/or associated capture and venting equipment that is to assure that they are maintained in accordance with good engineering practice and in a manner minimizes and/eliminates fugitive emissions to the ambient air.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. When the VOC emissions from materials processed through this emissions unit is not vented to a flare, with a design control efficiency of at least 98% for VOC emissions.
 - b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

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

f) Testing Requirements

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



a. Design Efficiency Standard:

Install a flare with a design control efficiency of at least 98% for VOC emissions.

Applicable Compliance Method:

Compliance is demonstrated by the manufacturer's design efficiency of a design control efficiency of at least 98% for VOC emissions, for the flare.

The combined VOC emissions from this emission unit and J001 (Railcar and Truck Loading System) shall not exceed 8.06 ton per month averaged over a twelve-month rolling period.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the total of the following calculations:

Combined annual throughput of condensate product vapor from this emission unit and J001 (Railcar and Truck Loading System) venting to a flare, with a design control efficiency of at least 98% for VOC emissions:

Combined gallons of condensate loaded per year x loading loss* x lb to ton unit conversion x (1- flare control efficiency) = uncombusted VOC emissions.

With permit limit values:

$613,200,000 \text{ gal condensate/yr} \times 8.29 \text{ lb/1000 gal (loading loss)} \times (1 / 2000) \text{ ton/lb} \times (1-98\%) = 50.84 \text{ TPY VOC.}$

Annual throughput natural gasoline product vapor venting to Storage/Loading Flare:

Gallons natural gasoline loaded per year x loading loss* x lb to ton unit conversion x (1- flare control efficiency) = uncombusted VOC emissions.

With permit limit values:

$185,953,000 \text{ gal natural gasoline/yr} \times 6.66 \text{ lb/1000 gal (loading loss)} \times (1 / 2000) \text{ ton/lb} \times (1-98\%) = 12.39 \text{ TPY VOC.}$

*loading losses are calculated as demonstrated on the application calculation sheet.

Combined gallons of condensate loaded per year x loading loss* x (1 / condensate density) x condensate heating value x VOC emission factor for combustion from AP-42 Table 1.4-2 and 1.4-3 (7/98) x lb to ton unit conversion = combustion related VOC emissions.

With permit limit values:

613,200,000 gal condensate/yr x 8.29 lb/1000 gal (loading loss) x (1 / 6.15) gal/lb condensate x 0.125 MMBTU/gal x 0.0054 lb VOC/MMBTU x (1 / 2000) ton/lb = 0.28 TPY VOC.

Annual throughput natural gasoline product vapor venting to a flare:

Gallons natural gasoline loaded per year x loading loss* x (1 / natural gasoline density) x natural gasoline heating value x VOC emission factor for combustion from AP-42 Table 1.4-2 and 1.4-3 (7/98) x lb to ton unit conversion = combustion related VOC emissions.

With permit limit values:

185,953,000 gal natural gasoline/yr x 6.66 lb/1000 gal (loading loss) x (1 / 5.4) gal/lb natural gasoline x 0.11 MMBTU/gal x 0.0054 lb VOC/MMBTU x (1 / 2000) ton/lb = 0.07 TPY VOC.

VOC emissions for Plant Flare (P003) combustion related to butane from unloading of nitrogen from rail cars is calculated as follows:

Heat input for butane inert blowdowns (5.073 MMBTU/hr) x 0.0054 lb VOC/MMBTU VOC emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.12 TPY VOC.

VOC emissions for Plant Flare combustion related to butane from hose blowdown is calculated as follows:

Heat input for butane hose blowdown (0.044 MMBTU/hr) x 0.0054 lb VOC/MMBTU VOC emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.001 TPY VOC.

VOC emissions for Plant Flare combustion related to propane from unloading of nitrogen from rail cars is calculated as follows:

Heat input for propane inert blowdowns (2.657 MMBTU/hr) x 0.0054 lb VOC/MMBTU VOC emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.06 TPY VOC.

VOC emissions for Plant Flare combustion related to propane from hose blowdown is calculated as follows:

Heat input for propane hose blowdown (0.116 MMBTU/hr) x 0.0054 lb VOC/MMBTU VOC emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.003 TPY VOC

VOC emissions from uncombusted VOCs related to propane and butane hose blowdowns and inert venting from unloading of nitrogen from rail cars is calculated as follows:

$$AER = [M/h_x \times (1-C_e) \times MW_x \times VOC_x] \times (8760/2000)$$



Where:

AER = Annual VOC emissions, in tons;

M/h_x = Mole per hour;

Ce = Combustion percentage (98% (0.98), application calculation sheet);

MW_x = Molecular weight;

VOC_x = VOC percent weight of uncontrolled gas,

Uncombusted VOCs with permit limit values:

Butane inert blowdowns:

$4.05 \text{ lbmol/hr} \times (1 - 0.98) \times 61.3 \text{ lb/lbmol} \times 100 \text{ wt\%} \times 8760 \text{ hrs/yr}$
 $\times 1 \text{ ton} / 2000 \text{ lb} = 21.8 \text{ TPY VOC.}$

Butane hose blowdowns:

$0.04 \text{ lbmol/hr} \times (1 - 0.98) \times 61.3 \text{ lb/lbmol} \times 100 \text{ wt\%} \times 8760 \text{ hrs/yr}$
 $\times 1 \text{ ton} / 2000 \text{ lb} = 0.2 \text{ TPY VOC.}$

Propane inert blowdowns:

$2.78 \text{ lbmol/hr} \times (1 - 0.98) \times 44.02 \text{ lb/lbmol} \times 98.9 \text{ wt\%} \times 8760 \text{ hrs/yr}$
 $\times 1 \text{ ton} / 2000 \text{ lb} = 10.6 \text{ TPY VOC.}$

Propane hose blowdowns:

$0.121 \text{ lbmol/hr} \times (1 - 0.98) \times 44.02 \text{ lb/lbmol} \times 98.9 \text{ wt\%} \times 8760 \text{ hrs/yr}$
 $\times 1 \text{ ton} / 2000 \text{ lb} = 0.5 \text{ TPY VOC.}$

And then the summation of all the above tons per year values are divided by 12.

b. Emission Limitation:

The combined NO_x emissions from this emission unit and J001 (Railcar and Truck Loading System) shall not exceed 0.56 ton per month averaged over a twelve-month rolling period.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the total of the following calculations:

Combined annual throughput of condensate product vapor from this emission unit and J001 (Railcar and Truck Loading System) venting to a flare, with a design control efficiency of at least 98% for VOC emissions:



Combined gallons of condensate loaded per year x loading loss* x (1 / condensate density) x condensate heating value x NOx emission factor for combustion from AP-42 Table 1.4-2 and 1.4-3 (7/98) x lb to ton unit conversion.

With permit limit values:

613,200,000 gal condensate/yr x 8.29 lb/1000 gal (loading loss) x (1 / 6.15) gal/lb condensate x 0.125 MMBTU/gal x 0.068 lb NOx/MMBTU x (1 / 2000) ton/lb = 3.51 TPY NOx.

Annual throughput natural gasoline product vapor venting to a flare:

Gallons natural gasoline loaded per year x loading loss* x (1 / natural gasoline density) x natural gasoline heating value x NOx emission factor for combustion from AP-42 Table 1.4-2 and 1.4-3 (7/98) x lb to ton unit conversion.

With permit limit values:

185,953,000 gal natural gasoline/yr x 6.66 lb/1000 gal (loading loss) x (1 / 5.4) gal/lb natural gasoline x 0.11 MMBTU/gal x 0.068 lb NOx/MMBTU x (1 / 2000) ton/lb = 0.86 TPY NOx.

*loading losses are calculated as demonstrated on the application calculation sheet.

NOx emissions for Plant Flare (P003) combustion related to butane from unloading of nitrogen from rail cars is calculated as follows:

Heat input for butane inert blowdowns (5.073 MMBTU/hr) x 0.068 lb NOx/MMBTU NOx emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 1.51 TPY NOx.

NOx emissions for Plant Flare combustion related to butane from hose blowdown is calculated as follows:

Heat input for butane hose blowdown (0.044 MMBTU/hr) x 0.068 lb NOx/MMBTU NOx emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.01 TPY NOx.

NOx emissions for Plant Flare combustion related to propane from unloading of nitrogen from rail cars is calculated as follows:

Heat input for propane inert blowdowns (2.657 MMBTU/hr) x 0.068 lb NOx/MMBTU NOx emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.79 TPY NOx.

NOx emissions for Plant Flare combustion related to propane from hose blowdown is calculated as follows:



Heat input for propane hose blowdown (0.116 MMBTU/hr) x 0.068 lb NOx/MMBTU NOx emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.03 TPY NOx

And then the summation of all the above tons per year values are divided by 12.

c. Emissions Limitation:

The combined CO emissions from this emission unit and J001 (Railcar and Truck Loading System) shall not exceed 3.05 tons per month averaged over a twelve-month rolling period.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the total of the following calculations:

Combined annual throughput of condensate product vapor from this emission unit and J001 (Railcar and Truck Loading System) venting to a flare, with a design control efficiency of at least 98% for VOC emissions:

Combined gallons of condensate loaded per year x loading loss* x (1 / condensate density) x condensate heating value x CO emission factor for combustion from AP-42 Table 1.4-2 and 1.4-3 (7/98) x lb to ton unit conversion.

With permit limit values:

613,200,000 gal condensate/yr x 8.29 lb/1000 gal (loading loss) x (1 / 6.15) gal/lb condensate x 0.125 MMBTU/gal x 0.37 lb CO/MMBTU x (1 / 2000) ton/lb = 19.12 TPY CO.

Annual throughput natural gasoline product vapor venting to a flare:

Gallons natural gasoline loaded per year x loading loss* x (1 / natural gasoline density) x natural gasoline heating value x CO emission factor for combustion from AP-42 Table 1.4-2 and 1.4-3 (7/98) x lb to ton unit conversion.

With permit limit values:

185,953,000 gal natural gasoline/yr x 6.66 lb/1000 gal (loading loss) x (1 / 5.4) gal/lb natural gasoline x 0.11 MMBTU/gal x 0.37 lb CO/MMBTU x (1 / 2000) ton/lb = 4.67 TPY CO.

*loading losses are calculated as demonstrated on the application calculation sheet.

CO emissions for Plant Flare combustion related to butane from unloading of nitrogen from rail cars is calculated as follows:



Heat input for butane inert blowdowns (5.073 MMBTU/hr) x 0.37 lb CO/MMBTU CO emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 8.22 TPY CO.

CO emissions for Plant Flare combustion related to butane from hose blowdown is calculated as follows:

Heat input for butane hose blowdown (0.044 MMBTU/hr) x 0.37 lb CO/MMBTU CO emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.07 TPY CO.

CO emissions for Plant Flare combustion related to propane from unloading of nitrogen from rail cars is calculated as follows:

Heat input for propane inert blowdowns (2.657 MMBTU/hr) x 0.37 lb CO/MMBTU CO emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 4.31 TPY CO.

CO emissions for Plant Flare combustion related to propane from hose blowdown is calculated as follows:

Heat input for propane hose blowdown (0.116 MMBTU/hr) x 0.37 lb CO/MMBTU CO emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.19 TPY CO.

And then the summation of all the above tons per year values are divided by 12.

d. Emissions Limitation:

The combined PE emissions from this emission unit and J001 (Railcar and Truck Loading System) shall not exceed 0.061 ton per month averaged over a twelve-month rolling period.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the total of the following calculations:

Combined annual throughput of condensate product vapor from this emission unit and J001 (Railcar and Truck Loading System) venting to a flare, with a design control efficiency of at least 98% for VOC emissions:

Combined gallons of condensate loaded per year x loading loss* x (1 / condensate density) x condensate heating value x PE emission factor for combustion from AP-42 Table 1.4-2 and 1.4-3 (7/98) x lb to ton unit conversion.

With permit limit values:

613,200,000 gal condensate/yr x 8.29 lb/1000 gal (loading loss) x (1 / 6.15) gal/lb condensate x 0.125 MMBTU/gal x 0.0075 lb PE/MMBTU x (1 / 2000) ton/lb = 0.385 TPY PE (all sizes).



Annual throughput natural gasoline vapor product venting to a flare:

Gallons natural gasoline loaded per year x loading loss* x (1 / natural gasoline density) x natural gasoline heating value x PE emission factor for combustion from AP-42 Table 1.4-2 and 1.4-3 (7/98) x lb to ton unit conversion.

With permit limit values:

185,953,000 gal natural gasoline/yr x 6.66 lb/1000 gal (loading loss) x (1 / 5.4) gal/lb natural gasoline x 0.11 MMBTU/gal x 0.0075 lb PE/MMBTU x (1 / 2000) ton/lb = 0.09 TPY PE (all sizes).

*loading losses are calculated as demonstrated on the application calculation sheet.

PE emissions for Plant Flare combustion related to butane from unloading of nitrogen from rail cars is calculated as follows:

Heat input for butane inert blowdowns (5.073 MMBTU/hr) x 0.0075 lb PE/MMBTU PE emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.167 TPY PE (all sizes).

PE emissions for Plant Flare combustion related to butane from hose blowdown is calculated as follows:

Heat input for butane hose blowdown (0.044 MMBTU/hr) x 0.0075 lb PE/MMBTU PE emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.001 TPY PE (all sizes).

PE emissions for combustion related to propane from unloading of nitrogen from rail cars is calculated as follows:

Heat input for propane inert blowdowns (2.657 MMBTU/hr) x 0.0075 lb PE/MMBTU PE emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.087 TPY PE (all sizes).

PE emissions for combustion related to propane from hose blowdown is calculated as follows:

Heat input for propane hose blowdown (0.116 MMBTU/hr) x 0.0075 lb PE/MMBTU PE emission factor from AP-42 Table 1.4-2 and 1.4-3 (7/98) x 8760 hrs/yr x 1 ton / 2000 lb = 0.004 TPY PE (all sizes).

And then the summation of all the above tons per year values are divided by 12.

g) Miscellaneous Requirements

(1) None.