201900112

Michigan Department Of Environmental Quality - Air Quality Division

RENEWABLE OPERATING PERMIT APPLICATION
C-001: CERTIFICATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to provide this information may result in civil and/or criminal penalties. Please type or print clearly.

This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.

Form Type **C-001**	SRN A9831

Stationary Source Name Marathon Petroleum Company LP	
City Detroit	County Wayne

SUBMITTAL CERTIFICATION INFORMATION

1. Type of Submittal *Check only one box.*

☐ Initial Application (Rule 210) ☒ Notification / Administrative Amendment / Modification (Rules 215/216)

☐ Renewal (Rule 210) ☐ Other, describe on AI-001

2. If this ROP has more than one Section, list the Section(s) that this Certification applies to 1

3. Submittal Media ☐ E-mail ☐ FTP ☐ Disk ☒ Paper

4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal.

AI **GOHT**

CONTACT INFORMATION

Contact Name Kay Bedenis	Title Advanced HESS Professional
Phone number 313-297-6289	E-mail address kfbedenis@marathonpetroleum.com

This form must be signed and dated by a Responsible Official.

Responsible Official Name David T. Roland			Title Deputy Assistant Secretary	
Mailing address 1001 South Oakwood Avenue				
City Detroit	State MI	ZIP Code 48217	County Wayne	Country USA

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.

Signature of Responsible Official

6/21/2019
Date

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Michigan Department of Environmental Quality
Air Quality Division

RENEWABLE OPERATING PERMIT
M-001: RULE 215 CHANGE NOTIFICATION
RULE 216 AMENDMENT/MODIFICATION APPLICATION

This information is required by Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment.

1. SRN A9831	2. ROP Number MI-ROP-A9831-2012c	3. County Wayne
4. Stationary Source Name	Marathon Petroleum Company LP	
5. Location Address	1001 South Oakwood Boulevard	6. City Detroit

7. Submittal Type - *The submittal must meet the criteria for the box checked below. Check only one box. Attach a mark-up of the affected ROP pages for applications for Rule 216 changes.*

- ☐ **Rule 215(1) Notification of change.** *Complete Items 8 – 10 and 14*
- ☐ **Rule 215(2) Notification of change.** *Complete Items 8 – 10 and 14*
- ☐ **Rule 215(3) Notification of change.** *Complete Items 8 – 11 and 14*
- ☐ **Rule 215(5) Notification of change.** *Complete Items 8 – 10 and 14*
- ☐ **Rule 216(1)(a)(i)-(iv) Administrative Amendment.** *Complete Items 8 – 10 and 14*
- ☒ **Rule 216(1)(a)(v) Administrative Amendment.** *Complete Items 8 – 14. Results of testing, monitoring & recordkeeping must be submitted. See detailed instructions.*
- ☐ **Rule 216(2) Minor Modification.** *Complete Items 8 – 12 and 14*
- ☐ **Rule 216(3) Significant Modification.** *Complete Items 8 – 12 and 14, and provide any additional information needed on ROP application forms. See detailed instructions.*
- ☐ **Rule 216(4) State-Only Modification.** *Complete Items 8 – 12 and 14*

8. Effective date of the change. (MM/DD/YYYY) *See detailed instructions.* 10/25/2018	9. Change in emissions? ☒ Yes ☐ No

10. Description of Change - *Describe any changes or additions to the ROP, including any changes in emissions and/or pollutants that will occur. If additional space is needed, complete an Additional Information form (AI-001).*

Refer to AI-001 form.

11. New Source Review Permit(s) to Install (PTI) associated with this application? ☒ Yes ☐ No

If Yes, enter the PTI Number(s) 118-15 ____ - ____ - ____ - ____

12. Compliance Status - *A narrative compliance plan, including a schedule for compliance, must be submitted using an AI-001 if any of the following are checked No.*

a. Is the change identified above in compliance with the associated applicable requirement(s)? ☒ Yes ☐ No

b. Will the change identified above continue to be in compliance with the associated applicable requirement(s)? ☒ Yes ☐ No

c. If the change includes a future applicable requirement(s), will timely compliance be achieved? ☒ Yes ☐ No

13. Operator's Additional Information ID - *Create an Additional Information (AI) ID for the associated AI-001 form used to provide supplemental information.* **AI GOHT**

14. Contact Name	Telephone No.	E-mail Address
Kay Bedenis	313-297-6289	kfbedenis@marathonpetroleum.com

15. This submittal also updates the ROP renewal application submitted on 01/25/2017 ☒ Yes ☐ N/A
(If yes, a mark-up of the affected pages of the ROP must be attached.)

NOTE: A CERTIFICATION FORM (C-001) SIGNED BY A RESPONSIBLE OFFICIAL MUST ACCOMPANY ALL SUBMITTALS

201900112

Michigan Department of Environmental Quality - Air Quality Division

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: A9831	Section Number (if applicable): 1

1. Additional Information ID
AI-GOHT

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

PTI 118-15 covers the installation and operation of equipment associated with the Tier 3 fuels project, including a new Gas Oil Hydrotreater Charge Heater (EU08-GOHTCHARHTR2-S1), and establishes three new flexible groups (FGTIER3-S1, FGTIER3SO2-S1, and FGCHANGES-S1. FGTIER3-S1 includes emissions units and flexible groups that use the hybrid test for PSD applicability and FGTIER3SO2 includes emission units used to demonstrate that there will be no increase in SO2 emissions due to the Tier 3 fuels project. FGCHANGES-S1 establishes enforcable conditions for the purpose of controlling emissions from emissions units and flexible groups that are not part of the Tier 3 fuels project. Pursuant to the instructions provided in PTI 118-15, the conditions for each emission unit for which conditions are established under FGCHANGES-S1 (EU42-43SULRECOV-S1,EU-COKERFLARE-S1, EU-COKERFLARE-S1, EU27-ZURNBOILER-S1, EUUNIFFLARE-S1) will be rolled into their respective emission unit/flexible group sections of the ROP as specified in the PTI and the FGCHANGES-S1 flexible group will be deleted.

20190011
20190012

HESS Department

Marathon Petroleum Company LP

1001 S. Oakwood
Detroit, MI 48217-1319
Main No.: 313.843.9100
Fax: 313.297.6221

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MACES_____ MAERS_____
FILE_____

June 20, 2019

Ms. Janis Ransom
MDEQ, Air Quality Division
Cadillac District Office
120 W. Chapin Street
Cadillac, MI 49601-2158

RE: ADMINISTRATIVE AMENDMENT APPLICATION INCORPORATING PTI 118-15 AND 122-15 INTO MI-ROP-A9831-2012C FOR THE MARATHON PETROLEUM COMPANY LP REFINERY LOCATED IN DETROIT, MICHIGAN (SRN: A9831)

Dear Ms. Ransom,

Pursuant to R336.1216(1)(a)(v) of Michigan's Administrative Rules for Air Pollution Control (PA 451 of 1994), the Marathon Petroleum Company Detroit Refinery and Detroit Refining Logistics, LLC are submitting the attached Administrative Amendment application incorporating PTI 118-15 and 122-15 into the Renewable Operating Permit (ROP) MI-ROP-A9831-2012c. These PTIs were issued on May 26, 2016.

Equipment covered by PTI 122-15 became operational on June 21, 2018. This equipment is associated with Detroit Refining Logistics LLC (Section 4 of the ROP).

Equipment covered by PTI 118-15 became operational on October 25, 2018. This equipment is associated with Marathon Petroleum Company LP (Section 1 of the ROP).

The required Rule 216 Amendment/Modification Application form (M-001) and Certification form (C-001), signed by the Responsible Official (RO), are attached. A redlined version of the ROP is also included.

Should you have any questions regarding this Administrative Amendment application, please contact Kay Bedenis at (313) 297-6289.

Sincerely,

Kay Bedenis

Kay Bedenis
Advanced HESS Professional
Marathon Petroleum Company LP

Attachments

cc: Jorge Acevedo, MDEQ

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

EFFECTIVE DATE: SEPTEMBER 27, 2012

REVISION DATES: MAY 20, 2013; JANUARY 16, 2014; SEPTEMBER 12, 2016

ISSUED TO

MARATHON PETROLEUM COMPANY LP

State Registration Number (SRN): A9831

LOCATED AT

1300 South Fort Street, 12700 Toronto Street, and 301 South Fort Street, Detroit, Michigan 48217

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-A9831-2012c

Expiration Date: September 27, 2017

Administratively Complete ROP Renewal Application Due Between:
March 27, 2016 and March 27, 2017

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Michigan Air Pollution Control Rule 210(1), this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-A9831-2012c

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environmental Quality

Wilhemina McLemore, Detroit District Supervisor

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AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environmental Quality (MDEQ) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a source-wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements will be identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined or subsumed, or is state only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

SECTION 1

ISSUED TO

Marathon Petroleum Company LP

State Registration Number (SRN): A9831

LOCATED AT

1300 South Fort Street
Detroit, MI 48217

A-S1. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state only enforceable Source-wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. 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 conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities **(R 336.1213(1)(d))**:
   a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
   c. Inspect, at reasonable times, any of the following:
      i. Any stationary source.
      ii. Any emission unit.
      iii. Any equipment, including monitoring and air pollution control equipment.
      iv. Any work practices or operations regulated or required under the ROP.
   d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.

5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**

7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**

8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment and Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**

10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Except as provided in Subrules 2, 3, and 4 of Rule 301, states in part; "a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of Rule 301(1)(a) or (b) unless otherwise specified in this ROP." The grading of visible emissions shall be determined in accordance with Rule 303. **(R 336.1301(1) in pertinent part)**:
    a. A 6-minute average of 20 % opacity, except for one 6-minute average per hour of not more than 27 % opacity.
    b. A limit specified by an applicable federal new source performance standard.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
    a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.[1] **(R 336.1901(a))**
    b. Unreasonable interference with the comfortable enjoyment of life and property.[1] **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1). **(R 336.2001)**

14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**

15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(4))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate **(R 336.1213(3)(b))**:
    a. The date, location, time, and method of sampling or measurements.
    b. The dates the analyses of the samples were performed.
    c. The company or entity that performed the analyses of the samples.
    d. The analytical techniques or methods used.
    e. The results of the analyses.
    f. The related process operating conditions or parameters that existed at the time of sampling or measurement.

17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification and Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a responsible official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**

19. A responsible official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. **(R 336.1213(4)(c))**

20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**

21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
    a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
    b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
    c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following **(R 336.1213(3)(c))**:
    a. Submitting a certification by a responsible official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a responsible official which states that, "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete". The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**

24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**

25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a responsible official in a manner consistent with the CAA. **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
    a. The applicable requirements are included and are specifically identified in the ROP.
    b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

    Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
    a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
    b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
    c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**
    d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
    a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
    b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**

c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**

29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**

31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**

32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(9))**

33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
    a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
    b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
    c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
    d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(7))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR, Part 82, Subpart F.

37. If the permittee is subject to 40 CFR, Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR, Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR, Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR, Part 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR, Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).

39. If subject to Section 112(r) of the CAA and 40 CFR, Part 68, the permittee shall comply with the requirements of 40 CFR, Part 68, no later than the latest of the following dates as provided in 40 CFR, Part 68.10(a):
    a. June 21, 1999,
    b. Three years after the date on which a regulated substance is first listed under 40 CFR, Part 68.130, or
    c. The date on which a regulated substance is first present above a threshold quantity in a process.

40. If subject to Section 112(r) of the CAA and 40 CFR, Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR, Part 68.

41. If subject to Section 112(r) of the CAA and 40 CFR, Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR, Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit To Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.[2] **(R 336.1201(1))**

44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA. [2] **(R 336.1201(8), Section 5510 of Act 451)**

45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will

be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, MDEQ.[2] **(R 336.1219)**

46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months, or has been interrupted for 18 months, the applicable terms and conditions from that PTI shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, MDEQ, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.[2] **(R 336.1201(4))**

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B-S1. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

SOURCE-WIDE CONDITIONS

POLLUTION CONTROL EQUIPMENT:

NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate any non-continuous drain for more than 100 hours per 12-month rolling time period, as determined at the end of each calendar month.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall comply with all applicable requirements of 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart A-General Provisions, including without limitation 40 CFR 63.6(e)(1)(i), which provides in part, "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, 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."[2] **(R 336.1910, 40 CFR Part 63, Subpart A, 40 CFR 63.6(e)(1)(i))**

2. The permittee shall conduct an enhanced air monitoring program at the facility to address citizen concerns. The permittee shall monitor concentrations of carbon monoxide, PM10, sulfur dioxide, volatile organic compounds (TO-15 canister method – subset to be determined and approved in the enhanced air monitoring program), and total reduced sulfur at no less than four sites in a manner and with instrumentation approved by the AQD Air Monitoring Unit. The permittee shall monitor all required pollutants, according to the approved monitoring plan. Monitoring shall continue for at least ten years after November 5, 2012.[1] **(R 336.1901)**

3. The permittee shall keep records of all air monitoring data collected in the air monitoring program. The permittee shall submit all records to the AQD Air Monitoring Unit in an acceptable format within 45 days following the end of the quarter in which the data were collected.[1] **(R 336.1901)**

4. The permittee shall keep monthly and 12-month rolling time period records of the hours of operation of each non-continuous drain.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

See Appendices 3-S1 and 4-S1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. The permittee shall comply with the requirements of the Consent Decree No. 01-40119 between United States of America (Plaintiff) and County of Wayne, Michigan, State of Louisiana, State of Minnesota (Plaintiff-Interveners) v. Marathon Ashland Petroleum LLC (Defendant) and revisions thereto. **(R 336.1213(3))**

2. Each Responsible Official shall certify annually, using the format in Appendix 8, that the stationary source is in compliance with all stationary source-wide requirements. This certification shall be included as part of the annual certification of compliance as required in General Conditions 19 and 20 in Part A of Renewable Operating Permit MI-ROP-A9831-2012c. **(R 336.1213(4)(c))**

3. The permittee shall comply with the Fugitive Dust Control Program dated December 27, 1996 and revisions thereto. **(R 336.1213(3))**

4. The permittee shall comply with all applicable requirements of 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart A-General Provisions. **(40 CFR Part 63, Subpart A)**

5. The permittee shall comply with all applicable requirements of 40 CFR Part 63, Subpart CC-National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries. **(40 CFR Part 63, Subpart CC)**

6. The permittee shall comply with all applicable requirements of 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Subpart A-General Provisions. **(40 CFR Part 61, Subpart A)**

7. The permittee shall comply with all applicable requirements of 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Subpart M-National Emission Standard for Asbestos. **(40 CFR Part 61, Subpart M)**

8. The permittee shall comply with all applicable requirements of 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Subpart FF-National Emission Standard for Benzene Waste Operations. **(R 336.1201(3), Paragraph 18 and 19 of Consent Decree No. 01-40119, 40 CFR Part 61, Subpart FF, Consent Decree No. 01-40119)**

9. The permittee shall comply with all applicable requirements of Natural Resources and Environmental Protection Act, Act 451 of 1994, Subpart 324.5524. **(Act 451, Part 55, 324.5524)**

10. The permittee shall not cause or allow the emission of any volatile organic compound from any process unit turnaround at the facility, unless such emission is controlled by one of the following methods:
    a. Capture and disposal in a fuel gas system
    b. Combustion in a smokeless flare

c. Any method approved by the Division that recovers no less than 90%, by weight, of the uncontrolled volatile organic compounds that would otherwise be emitted into the atmosphere **(R 336.1616(1)(a-c))**

11. The permittee shall comply with the provisions of R336.1616 until the pressure of all vessels in the system is less than 5 psi gauge. **(R 336.1616(2))**

12. Except as provided for in SC IX.13, permittee shall notify the Division not less than 30 days before any process unit turnaround subject to the provisions of R 336.1616. **(R 336.1616(3))**

13. In the case of process unit turnarounds caused by circumstances beyond the control of the permittee, the Division shall be notified as soon as reasonably possible. **(R 336.1616(4), R 336.1213(3))**
Note: Process Unit Turnarounds, for this ROP, are defined as "planned and scheduled shutdowns in which the entire process unit is shut-down and deinventoried for major maintenance activities".

14. The permittee shall comply with all applicable requirements of 40 CFR Part 63, Subpart UUU-National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units. **(40 CFR Part 63, Subpart UUU)**

15. When the odor of hydrogen sulfide is found to exist beyond the property line of the facility, the permittee shall not cause or allow the concentration of hydrogen sulfide to exceed 0.005 parts per million by volume for a maximum period of 2 minutes. Compliance with this requirement will be established by following an approved H2S Fence Line Odor Plan. The plan will be implemented and maintained, and will be reviewed and if necessary amended based on operational experience at least once during the five years of this permit. The permittee shall submit any amendments to the plan to the AQD District Supervisor for approval. If the AQD does not notify the permittee within 90 days of submittal, the H2S Fence Line Odor Plan or amended plan shall be considered approved. **(R 336.1406(2), R 336.1901, R336.1213)**

16. The permittee shall comply with all applicable requirements of 40 CFR Part 63, Subpart ZZZZ-National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. **(40 CFR Part 63, Subpart ZZZZ)**

17. The permittee shall comply with all applicable requirements of 40 CFR Part 63, Subpart DDDDD- National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters. **(40 CFR Part 63, Subpart DDDDD)**

18. The conditions contained in this RO Permit for which a Consent Decree is the only identified applicable requirement shall be considered null and void upon the effective date of termination of the Consent Decree. The effective date of termination is defined for the purposes of this condition as the date upon which the Stipulation and Order for Termination is signed by a Circuit Court Judge.[2] **(R 336.1213(3))**

19. The provisions of Rule 406(2) are applicable requirements for the permittee.[2] **(R 336.1406(2))**

20. The permittee shall conduct a program of enhanced sweeping of paved roads in the vicinity of the Detroit refinery. No less than 180 days after beginning construction pursuant to Permit to Install No. 63-08 (construction began in 2008), the permittee shall submit a plan for the enhanced street sweeping program to the AQD District Supervisor as a proposed revision to the Fugitive Dust Control Program required in SC IX.3, Source Wide Conditions, of Renewable Operating Permit MI-ROP-A9831-2012c. The plan shall include the location, frequency, and estimated PM and PM10 benefits of the program. The permittee shall begin enhanced sweeping, according to the plan, no later than the date of startup of the heavy oil upgrade project. At any time, the permittee may submit a modified plan to the AQD District Supervisor.[1] **(R 336.1901)**

21. The permittee shall notify the Department if a change in land use occurs for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1) for the heavy oil upgrade project. The permittee shall submit the notification to the AQD District Supervisor within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD

District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.[1] **(R 336.1225(4))**

22. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Ja, as they apply to the facility.[2] **(40 CFR Part 60, Subparts A and Ja)**

23. No later than startup of EU70-COKER-S1, as defined in R 336.1119(p), the permittee shall permanently cease operating DHT compressors 1, 2, and 3, FCCU compressor 6, EU17-BTPLCHARHTR, EU17-BTPLINTRHTR, EU17-BTPLATFORMR, and EU07-DHTCHARHTR~~., and shall control emissions from 29 pressure relief valves to atmosphere in the LPG Tank Farm~~.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

24. Within 180 days after commencement of trial operation, the permittee shall submit to the AQD a sulfur content sampling plan for sulfur-laden process streams and products for the process units and products listed below. The plan shall consider catalyst life ("start of run" and "end of run" conditions) for the affected process units and products. The purpose of this sampling plan is to verify the sulfur distributions in the process simulations relied on in the permit application.[2] **(R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21)**
    - Crude unit
    - Vacuum unit
    - Coker and coker gas plant
    - Naphtha hydrotreater
    - Distillate hydrotreater
    - Kerosene hydrotreater
    - Gasoil hydrotreater
    - Sulfur recovery units, including sulfur storage tanks and rail car loading operations
    - Asphalt produced

25. The permittee shall comply with a sulfur content sampling plan for sulfur-laden process streams, products, sour water streams, and sulfur laden gaseous streams for the process units and products listed below. The plan shall consider catalyst life ("start of run" and "end of run" conditions) for the affected process units and products. Sampling under the plan must occur at least annually. The purpose of this sampling plan is to verify the sulfur distributions in the process simulations relied on in the permit application.[3] **(R 336.1201(3))**
    - Crude unit
    - Vacuum unit
    - Coker and coker gas plant
    - Naphtha hydrotreater
    - Distillate hydrotreater
    - Kerosene hydrotreater
    - Gasoil hydrotreater
    - Sulfur recovery units, including tail gas units, sulfur storage tanks and rail car loading operations
    - Asphalt produced

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).
[3]This condition is included at the request of the permittee.

C-S1. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU04-VACUUM-S1	Vacuum Unit. Area 4. The vacuum unit separates the reduced crude from the crude unit through the use of a vacuum column. The reduced crude is separated into light vacuum gas oil, medium vacuum gas oil, heavy vacuum gas oil, and a bottoms product called flux. The various fractions are sent to other units in the refinery for further processing. The vacuum unit consists of process vessels (including heat exchangers and vacuum column), process heater, tanks, containers, 2 cooling towers, flare, compressors, pumps, piping drains, and various components (pumps and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.) Other EU's have been created to address individual pieces of equipment within the vacuum unit that have specific applicable requirements. Permit: 262-02, 63-08E	11/09/2005 11/17/2010	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU04-VACHTR-S1	Vacuum Heater. Area 4H1. Fuel: Refinery fuel gas and natural gas. Permit: 108-02, 262-02, 175-06, 63-08E	11/09/2005 11/05/2012	FGHEATERS-S1 FGDHOUPANNUAL-S1
EU04-VAC2HTR-S1	Vacuum Heater. Area 4H2. Fuel: Refinery fuel gas and natural gas. Permit: 63-08E	11/05/2012	FGHEATERS-S1 FGDHOUPANNUAL-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU05-CRUDE-S1	Crude Unit. Area 5. The crude unit separates crude oil into various fractions through the use of distillation processes. These fractions are sent to other units in the refinery for further processing. The crude unit consists of process vessels (including heat exchangers and fractionation columns), the Alcorn heater, tanks, containers, compressors, pumps, piping, drains and various components (pump and compressors seals, process valves, pressure relief valves, flanges, connectors, etc.). Other EU's have been created to address individual pieces of equipment within the crude unit which have specific applicable requirements. Permit: 282-02, 63-08E	11/09/2005 11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU05-CRUDEHTR-S1	Crude Alcorn Heater, Area 5, Fuel: Refinery fuel gas, and Natural gas. Permit: 108-02, 262-02, 175-06, 63-08E	11/09/2005 11/05/2012	FGHEATERS-S1 FGDHOUPANNUAL-S1
EU-COKERFLARE-S1	Coker Plant Flare. Area 76. Permit: 63-08E	11/05/2012	FG-FLARES-S1 FGDHOUPANNUAL-S1
EUCRUDEFLARE-S1	Crude/Vacuum Unit Flare. Area 4. Permit: 63-08E	01/01/1966 11/05/2012	FGFLARES-S1 FGREFINEFLARES-S1
EUUNIFFLARE-S1	Unifiner Flare. Area 7. Permit: 63-08E	01/01/1974 11/05/2012	FGFLARES-S1 FGREFINEFLARES-S1
EUALKYFLARE-S1	Alkylation Unit Flare. Area 9. Permit: 63-08E	01/01/1974 11/05/2012	FGFLARES-S1 FGREFINEFLARES-S1
EUCPFLARE-S1	Cracking Plant Flare. Area 25. Permit: 63-08E	02/01/1949 11/05/2012	FGFLARES-S1 FGREFINEFLARES-S1
EU07-DHT-S1	Distillate Hydrotreater Unit: Area 7. The DHT Unit consists of process vessels (absorbing towers, stripper tower) cooling tower, flare, pumps, piping, drains, and various components (pumps and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.). Other EU's were created to address individual pieces of equipment within this unit that have specific applicable requirements. Permit: 262-02, 63-08E	11/09/2005 11/5/2012	FGPROCUNITS-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU08-GOHT-S1	Gas Oil Hydrotreater Unit: Area 8. Reacts sour gas oil streams with hydrogen over a catalyst bed to remove sulfur. The GOHT unit consists of process vessels (reactors, distillation tower, absorbing towers, stripper tower) and two charge heaters, cooling tower, flare, compressors, pumps, piping, drains, & various components (pumps & compressor seals, process valves, pressure relief valves, flanges, connectors, etc.). Other EU's were created to address individual pieces of equipment within this unit that have specific applicable requirements. Permit: 262-02, 63-08D, 118-15~~Gas Oil Hydrotreater Unit: Area 8. Reacts sour gas oil streams with hydrogen over a catalyst bed to remove sulfur. The GOHT unit consists of process vessels (reactors, distillation tower, absorbing towers, stripper tower) and a charge heater, cooling tower, flare, compressors, pumps, piping, drains, and various components (pumps and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.). Other EU's were created to address individual pieces of equipment within this unit that have specific applicable requirements. Permit: 262-02, 63-08E~~	11/09/2005 11/05/2012 05/26/2016	FGPROCUNITS-S1 FGDHOUPANNUAL-S1 FGTIER3-S1 FGTIER3SO2-S1
EU08-GOHTCHARHTR-S1	Gas Oil Hydrotreater Charge Heater. Area 8. Fuel: Refinery fuel gas and natural gas. Permit: 262-02, 63-08E	11/09/2005	FGHEATERS-S1 FGDHOUPANNUAL-S1 FGTIER3-S1 FGTIER3SO2-S1
EU08-GOHTCHARHTR2-S1	Gas Oil Hydrotreater Charge Heater No. 2. Area 8. Fuel: Refinery fuel gas and natural gas. Permit: 118-15	05/26/2016	FGHEATERS-S1 FGTIER3-S1 FGTIER3SO2-S1 FGDHOUPANNUAL-S1
EU09-ALKYDIBREBHTR-S1	Alkylation Deisobutanizer Heater 9H7, Area 9, Fuel: Refinery fuel gas, and Natural gas. Permit: 63-08E	11/05/2012	FGHEATERS-S1 FGDHOUPANNUAL-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU09-ALKYLATION-S1	Alkylation Unit: Area 9: The Alkylation unit reacts isobutane with olefins in the presence of sulfuric acid to produce alkylate, a high octane gasoline blending component. Reaction products are sent for further processing and separation in the fractionating section. Products from the unit include off-gas, alkylate, butane, isobutane, and propane. Off-gas is routed to the refinery fuel gas system. Alkylate, butane, and propane are directed to storage. Isobutane is recycled through the system for further processing. Alkylation unit consists of process vessels (including fractionators, reactor and caustic scrubber), heaters, tanks, containers, cooling tower, flare, compressors, pumps, piping, drains, and various components (pump and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.) Other EU's were created to address individual pieces of equipment within the Alkylation Unit which have specific applicable requirements. Permit: 262-02, 63-08E	01/01/1959 11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU11-FCCU-S1	Fluid Catalytic Cracking Unit. Area 11. The FCCU converts heavier hydrocarbons to lighter products in the presence of a catalyst. In the process coke is deposited on the catalyst. The spent catalyst is moved to the regenerator (11-V1) where the coke is burned off using air. The regenerator is equipped with cyclones and ESPs to capture catalyst (11-V1CYCLONES). The hot flue gas from the regenerator is directed to a flue gas cooler where heat is recovered as steam. The FCCU consists of process vessels (reactors, regenerator, fractionators, knock-out pots, and strippers) heater, tanks, containers, 2 cooling towers, compressors, pumps, piping, drains, and various components (pumps, and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.). Other EUs have been created to address equipment that has specific applicable requirements. Permit: 262-02, 28-02A, 175-06, 81-12, 63-08E	11/09/2005 11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1 FGTIER3SO2-S1
EU11-FCCUCHARHTR-S1	FCCU Charge Heater, Area 11. Fuel: Refinery fuel gas, and Natural gas. Permit: 108-02, 262-02, 63-08E	11/09/2005	FGHEATERS-S1
EU11-VENT14SUMP-S1	Process Vent. CCR Platformer aromatic sump (DV14-SUMP). Vapors from the aromatic sump are routed to the CP Flare (DV25-FS) for combustion.	04/30/1991	FGPROCVENTS-S1
EU11-VENT21XF-S1	Process Vent. Cracking Plant excess fuel gas (DV21-XF). The excess fuel gas is routed to the CP Flare (DV25-FS) for combustion.	02/01/1949	FGPROCVENTS-S1
EU11-VENT14XH-S1	Process Vent. CCR Platformer excess hydrogen gas (DV14-XHGAS). The excess hydrogen vapors are routed to the CP Flare (DV25-FS) for combustion.	07/01/1962 (install) 11/06/1978 (modify)	FGPROCVENTS-S1
EU11-VENT21V47-S1	Process Vent. Spent caustic drum vent (DV21-V47-SCD). Vapors from this vent are routed to the CP Flare (DV25-FS) for combustion.	02/01/1949 (install) 02/18/1976 (modify)	FGPROCVENTS-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU09-VENT9V50-S1	Process Vent. Purge gas from Alkylation Unit. Vapors from this vent are routed to the Alky Flare (DV9FS1) for combustion.	11/22/2010	FGPROCVENTS-S1
EU12-GASCON-S1	Gas Concentration Unit. Area 12. The Gas Con Unit processes liquids and off-gases from the FCCU main column overhead and various other hydrocarbons (liquid and gas) and produces gasoline and liquid petroleum gas. The Gas Con Unit consists of process vessels (including reboilers, condensers, exchangers, absorbers, and distillation columns) tanks, containers, compressors, pumps, piping, drains, and various components, (pump and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.). Other EU's have been created to address individual pieces of equipment with the Gas Concentration Unit that have specific applicable requirements. Permit: 262-02, 63-08E	11/09/2005 11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU16-NAPHHYTREAT-S1	Naphtha Hydrotreater Unit – Area 16. The NHT unit uses hydrogen to remove sulfur and nitrogen from straight-run naphthas. The process uses a catalyst to promote the desulfurization reaction. The desulfurized or sweet naphtha is blended into gasoline or used for platformer feed. The NHT unit consists of process vessels (including exchangers, reactors, receivers, separators, and a stripper column.) heaters, tanks, containers, pumps, piping, drains, and various components, (pump seals, process valves, pressure relief valves, flanges, connectors, etc. Other EU's have been created to address individual pieces of equipment which have specific applicable requirements. Permit: 262-02, 63-08E	01/01/1962 11/17/2010	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU16-NHTSTRIPREBOIL-S1	Naphtha Hydrotreater Stripper Reboiler. Area 16. Fuel: Refinery fuel gas, and natural gas. Permit: C-11495, 108-02, 262-02, 63-08E	11/09/2005	FGHEATERS-S1 FGDHOUPANNUAL-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU16-NHTCHARHTR-S1	Naphtha Hydrotreater Charge Heater. Area 16. Fuel: refinery fuel gas and natural gas. Permit: C-11493, 108-02, 262-02, 63-08E	11/09/2005	FGHEATERS-S1 FGDHOUPANNUAL-S1
EU13-PROPYLENE-S1	Propylene Unit. Area 13. The Propylene Unit is a distillation unit that separates the propane/propylene mix streams into propane and propylene products. Permit: 63-08E	01/01/1962 01/01/1974 11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU14-CCRPLATFORMER-S1	CCR Platformer Unit. Area 14. The Platformer Unit converts gasoline boiling range, low octane hydrocarbons to high-octane gasoline components using a catalyst in four stacked reactors. Hydrogen, a by-product, is used to pretreat streams to the Platformer. Catalyst is continuously withdrawn from the unit for regeneration. The Unit consists of process vessels (including exchangers, reactors, separators, and towers), heaters, tanks, containers, compressors, pumps, piping, drains, and various components, (pump and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.). Other EU's have been created to address individual pieces of equipment in this unit which have specific requirements. Permit C-9023, 262-02, 63-08E	11/09/2005	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU14-CCRPLCHARHTR-S1	CCR Platformer Charge Heater. Area 14. Fuel: Refinery fuel gas and natural gas. Permit: 262-02, 63-08E	11/09/2005	FGHEATERS-S1 FGDHOUPANNUAL-S1
EU14-CCRPLINTHTR-S1	CCR Platformer Intermediate Heater. Area 14. Fuel = refinery fuel gas and natural gas. Wayne County Permit C-11741. Permit: 5-98, 108-02, 262-02, 63-08E	11/09/2005	FGHEATERS-S1 FGDHOUPANNUAL-S1
EU14-CCRPLCATREG-S1	CCR Platformer Catalyst Regenerator. Area 14. CCR Platformer is regenerated on site once or twice per year. Any emissions generated from this operation are vented to the atmosphere through an exhaust stack. Permit: 262-02, 63-08E	11/09/2005	FGDHOUPANNUAL-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU19-KEROHYTREAT-S1	Kerosene Hydrotreater Unit. Area 19. The KHT unit uses hydrogen to remove sulfur and nitrogen from kerosene (and occasionally Naphtha). The process, called hydrotreating, uses a cobalt and molybdenum catalyst with hydrogen and temperature to promote the desulfurization reactor. The KHT unit consists of process vessels (including exchangers, a reactor, a receiver, separators, and a stripper column), a heater, tanks, containers, pumps, compressors, piping, drains, and various components (pump, and compressors, seals, process valves, pressure relief valves, flanges, connectors, etc.). Another EU have been created to address the charge heater, which has specific applicable requirements. Permit: 262-02, 63-08E	11/09/2005 06/16/2011	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU19-KHTCHARHTR-S1	Kerosene Hydrotreater Charge Heater. Area 19. Fuel: Refinery fuel gas, and natural gas. Permits: C-11494, 108-02, 262-02, 63-08E	11/09/2005	FGHEATERS-S1 FGDHOUPANNUAL-S1
EU21-CPTREATER-S1	Cracking Plant Treaters. Area 21. The Cracking Plant Treater Unit removes hydrogen sulfide (H2S) and mercaptans from the Gas Con Product streams. The CP Treater Unit consists of process vessels (including Merox catalyst beds and exchangers), tanks, containers, compressors, pumps, piping, drains, and various components (pump and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.) Another EU has been created to address the disulfide separator off-gas which has specific applicable requirements. Permit: 262-02, 63-08E	11/09/2005 11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU21-S2OFFGAS-S1	Disulfide separator off-gas at the Cracking Plant Treater. Area 21. The separator off-gas (DV21-V33) is normally routed to the FCCU charge heater (DV11-H1). It is also routable to the FCCU flare (DV25-FS). Permit: 262-02, 63-08E	11/09/2005	FGPROCVENTS-S1 FGDHOUPANNUAL-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU22-ASPHLOAD-S1	Asphalt loading facility. Area 22. This group consists of a six spot railcar loading rack and associated equipment (e.g.: piping, valves, pumps and loading arms). Permit: 142-11a	01/01/1998 01/11/2012	FGASPHALTLOADING-S1/S2 FGPROCUNITS-S1
EU22-FUELOILHTR-S1	Fuel Oil Heater. Area 22. Fuel: Refinery fuel gas and natural gas. Permit: 108-02, 262-02, 63-08E	Pre-1970	FGHEATERS-S1 FGDHOUPANNUAL-S1
EU22-MELVLPGRAILRACK-S4	LPG Railcar Loading Facility. Area 22. ~~This LPG railcar loading facility is located within the refinery.~~ The group includes all equipment (i.e. piping, vessels, valves, pumps, and loading arms) associated with the LPG loading rack~~s~~ in the Melvindale tank farm. For the purposes of this permit, LPG means a material in liquid form that is composed predominantly of any of the following hydrocarbons or their mixtures: propane, propylene, butane, isobutene, butylenes, and C3-C4 mixtures. ~~Excess hydrocarbons in loading hoses after loadings are directed to the Unifiner flare for combustion.~~	~~08/01/1962~~ 05/26/2016	FGPROCUNITS-S1 ~~FGDHOUPANNUAL-S1~~
EU22-TANKFARMS-S1	Tank Farm, Area 22. This emission group covers the three tanks farm areas. Permit: 262-02, 63-08E	11/09/2005 11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU22-PENTLOAD-S1	Loading facility for pentane/butane. Area 22. This group consists of a six spot rail car loading rack and associated equipment (e.g., piping, valves, pumps, and loading arms). The equipment is also used to unload ethanol from railcars into EUETHTANK. The ethanol-related requirements reside in EUETHTANK. Permit: 54-13	2006 08/29/2013	FGPROCUNITS-S1
EU27-ZURNBOILER-S1	Gas-fired Zurn boiler, Area 27. Fuel: natural gas. Permit: 18-12B, 63-08E	05/20/1991	FG-BOILERS-S1 FGDHOUPANNUAL-S1
EU27-B&WBOILER1-S1	Gas-fired boiler, Area 27. Fuel: Refinery fuel gas and natural gas. Permit: 67-02 18-12B, 63-08E	11/01/2003 11/05/2012	FG-BOILERS-S1 FGDHOUPANNUAL-S1
EU-TEMP_BOILER-S1	Temporary portable boiler. Fuel: Natural gas. Maximum heat input capacity of no greater than 97.48 MMBtu/hr. Permit: 18-12B	Notification Date	FG-BOILERS-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU29-WASTEWATER-S1	Crude Wastewater Treatment. Area29. This emission group includes all equipment (mixers, pumps, tanks, valves, vessels, desalter wastewater treatment train, etc.) associated with this area, including EUTANK29T79 (Does not include the induced gas flotation units) Permit: 63-08E	01/01/1946 (install) 01/01/1976 (modify) 01/2010	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU29-EG4-S1	Emergency generator at the wastewater treatment plant. This generator is described as EU-EG4 in Permit: 195-00.	08/17/2000	NA
EU29-IGF1-S1	1600 gallon per minute induced gas floatation unit consisting of a fixed-roof separator vessel and a fixed roof decant vessel equipped with a conservation vent. Permit: 190-00A	Install 03/05/2001 Modify 12/07/2001	FG29-IGF-S1 FGDHOUPANNUAL-S1
EU29-IGF2-S1	1600 gallon per minute induced gas floatation unit consisting of a fixed-roof separator vessel and a fixed roof decant vessel equipped with a conservation vent. Permit: 190-00A	Install 03/05/2001 Modify 12/07/2001	FG29-IGF-S1 FGDHOUPANNUAL-S1
EU38-BARGELOAD-S1	Barge loading operation for asphalt cement. This equipment is part of EU38-ROUGETERMNL-S1. Permit: 148-11A, 142-11A	1968 01/2012	FGASPHALTLOADING-S1/S2
EU38-ROUGETERMNL-S1	Rouge Terminal. Area 38. This facility is used for the storage and barge loading of asphalt. The loading racks used for loading trucks with asphalt and two asphalt polymer tanks at the same site are operated under separate management and are considered part of Section 2 of this RO permit.	01/01/1968	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU41-SOURWATER-S1	Sour Water Stripper. Area 41. The Sour Water Stripper removes hydrogen sulfide (H2S) and ammonia from the sour water stream in distillation towers heated by steam. The acid gases from the tower are routed to the Sulfur Plant. The stripped sour water is sent to the refinery sewer system. This emission group includes all equipment (pumps, tanks, vessels) in this area. Permit: 262-02, 63-08E	11/09/2005 11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU42-43SULRECOV-S1	Sulfur Plant. Area 42 and 43. The Sulfur Recovery Plant removes hydrogen sulfide from acid gas and converts it to elemental sulfur using Claus Process (Trains A, B and C) and the SCOT Tail Gas Treating Unit process (Trains No. 1 and No. 2). The exhaust tail gas is routed to the thermal oxidizer. This emission group consists of process vessels (including thermal reactors, an absorbing tower, and a stripping tower), heaters, tanks, containers, compressors, seals, process valves, flanges, connectors, etc.). Other EU's have been created to address individual units which have specific applicable requirements. Permit: C-9603, 9604, 9605, 262-02, 81-12, 63-08E	11/09/2005 11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1 FGTIER3-S1 FGTIER3SO2-S1
EU70-COKER-S1	Delayed Coker. Area 70. The Coker converts Vacuum Resid (Crude Vacuum Tower Bottoms), a product normally sold as asphalt or blended into residual fuel oil, into lighter, more valuable products. The Vacuum Resid feedstock is heated before it enters the main fractionator, where lighter material vaporizes. The fractionator bottoms are routed through a fired heater and then into a coke drum. This emission unit consists of process vessels (fractionators), coke drums, heater, cooling tower, compressors, pumps, piping, drains, and various components (pumps and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.). This emission group includes the Coke Handling System, which will collect, size, and transport the petroleum coke created during the coking process. This system consists of a coke pit, storage pad, enclosed crusher, enclosed conveyors, and surge bins. Other EU's were created to address individual pieces of equipment within this unit that have specific applicable requirements. Permit: 63-08E	11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU70-COKERHTR-S1	Coker Charge Heater. Area 70. Fuel: Refinery fuel gas and natural gas. Permit: 63-08D	11/05/2012	FGHEATERS-S1 FGDHOUPANNUAL-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU72-SULRBLOCK2-S1	Sulfur Block 2. Area 72. The Sulfur Block removes hydrogen sulfide from acid gas and converts it to elemental sulfur using Claus Process (Trains A and B), the SCOT Tail Gas Treating Unit process (Trains No. 1 and No. 2), and associated amine treating equipment. The exhaust tail gas is routed to a thermal oxidizer. This emission group consists of process vessels (including thermal reactors, an absorbing tower, and a stripping tower), heaters, tanks, containers, compressors, seals, process valves, flanges, connectors, etc.). Other EU's have been created to address individual units which have specific applicable requirements. Permit: 63-08E	11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1 FGTIER3-S1 FGTIER3SO2-S1
EU73-SOURWATER2-S1	Sour Water Stripper. Area 73. The Sour Water Stripper removes hydrogen sulfide (H2S) and ammonia from the sour water stream in distillation towers heated by steam. The acid gases from the tower are routed to the Sulfur Plant. The stripped sour water is sent to the refinery sewer system. This emission group includes all equipment (pumps, tanks, vessels) in this area. Permit: 63-08E	11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU76-UTILITIES-S1	Coker plant flare and flare gas recovery systems. Area 76. Permit: 63-08E	11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU77-DHTHYTREAT-S1	Distillate Hydrotreater Unit: Area 77. Reacts sour distillate (and occasionally gas oil) streams with hydrogen over a catalyst bed to remove sulfur. The DHT unit consists of process vessels (reactors, distillation tower, absorbing towers, stripper tower), heater, cooling tower, compressors, pumps, piping, drains, and various components (pumps and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.). Other EU's were created to address individual pieces of equipment within this unit that have specific applicable requirements. Permit: 63-08E	11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU77-DHTHTR-S1	Distillate Hydrotreater Heater. Area 77. Fuel: Refinery fuel gas and natural gas. Permit: 63-08E	11/05/2012	FGHEATERS-S1 FGDHOUPANNUAL-S1
EU78-FUELGASRECOVERY-S1	Fuel gas recovery compressor. Area 78. Permit: 63-08E	11/05/2012	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EU99-LPGLOADRACK-S1	LPG Truck Loading Facility. Area 99. This LPG loading facility is located at the Marketing Terminal. The group includes all equipment (i.e.: piping, vessels, valves, pumps, and loading arms) associated with the LPG loading racks.	01/01/1980	FGPROCUNITS-S1 FGDHOUPANNUAL-S1
EUCOOLTOWERA-S1	Cooling tower A. Permit: 63-08E	11/05/2012	FGCOOLTOWERS-S1 FGDHOUPANNUAL-S1
EUCOOLTOWERC-S1	Cooling tower C. Permit: 63-08E	11/05/2012	FGCOOLTOWERS-S1 FGDHOUPANNUAL-S1
EUCOOLTOWERD-S1	Cooling tower D. Permit: 63-08E	11/05/2012	FGCOOLTOWERS-S1 FGDHOUPANNUAL-S1
EUCOOLTOWERE-S1	Cooling tower E. Permit: 63-08E	11/05/2012	FGCOOLTOWERS-S1 FGDHOUPANNUAL-S1
EUCOOLTOWERF-S1	Cooling tower F. Permit: 63-08E	11/05/2012	FGCOOLTOWERS-S1 FGDHOUPANNUAL-S1
EUCOOLTOWERG-S1	Cooling tower G. Permit: 63-08E	11/05/2012	FGCOOLTOWERS-S1 FGDHOUPANNUAL-S1
EUCOOLTOWERH-S1	Cooling tower H. Permit: 63-08E	11/05/2012	FGCOOLTOWERS-S1 FGDHOUPANNUAL-S1
EUCOOLTOWERNEW-S1	New cooling tower installed as part of the heavy oil upgrade project. Permit: 63-08E	11/05/2012	FGCOOLTOWERS-S1 FGDHOUPANNUAL-S1
EUNEWCOLDCLEANERS-S1	This emission unit consists of one or more small cold cleaners which are exempt from the requirements of R 336.1201 and which were installed after July 01, 1979.	After 07/01/1979	FGCOLDCLEANERS-S1
EUBENZNESHAP-S1	This emission unit consists of equipment at the facility that is subject to the requirements of the Benzene Waste NESHAP. Permit: 184-03, 68-03D	11/09/2005 11/05/2012	NA
EUNSPSQQQ-S1	All individual drain systems, oil-water separators and the aggregate facilities that are subject to 40 CFR Part 60, Subpart QQQ. A current list of subject items is maintained by the refinery.	11/09/2005 11/05/2012	NA
EU5TANK18-S1	Internal floating roof tank with working capacity of 35,000 gallons and total capacity of 42,160 gallons. Permit: 96-11	2011	FG-RagLayerTanks-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU5TANK19-S1	Internal floating roof tank with working capacity of 35,000 gallons and total capacity of 42,160 gallons. Permit 96-11	2011	FG-RagLayerTanks-S1
EUTANK11-S1	Tank 11, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 585,900 gallons. Permit: 262-02	01/01/1975	FGGROUP2-S1
EUTANK15-S1	Tank 15, a small horizontal tank for storage of petroleum liquids with a true vapor pressure less than 11 psia. Capacity = 2940 gallons.	01/01/1973	FGRULE290-S1
EUTANK16-S1	Tank 16, a cone roof tank for the storage of heavy petroleum liquids with a true V. P. of 1.5 psia or less. Capacity = 190512 gallons. Permit: 262-02	01/01/1961	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK17-S1	Tank 17, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 190,512 gallons. Permit: 262-02	01/01/1961	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK18-S1	Tank 18, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 389,382 gallons. Permit: 262-02	01/01/1961	FGGROUP2-S1
EUTANK19-S1	Tank 19, an internal floating roof tank for the storage of petroleum liquids with a true vapor pressure of 11.0 psia or less. Capacity = 389,382 gallons. Permit: 262-02	11/09/2005	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK23-S1	Tank 23, an internal floating roof tank for the storage of slop oil. Capacity = 455,000 gallons. Permit: 198-02	10/26/2003	FGIFRTANKS-S1 FGHOUPTANKS-S1
EUTANK24-S1	Tank 24, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 949,536 gallons. Permit: 262-02	01/01/1948	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK27-S1	Tank 27, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 870,408 gallons. Permit: 262-02	01/01/1952	FGGROUP2-S1 FGHOUPTANKS-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUTANK28-S1	Tank 28, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 951,048 gallons. Permit: 262-02	01/01/1948	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK30-S1	Tank 30, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 974,358 gallons. Permit: 262-02	01/01/1948	FGGROUP2-S1
EUTANK31-S1	Tank 31, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 959,658 gallons. Permit: 262-02	01/01/1948	FGGROUP2-S1
EUTANK32-S1	Tank 32, External Floating Roof Tank.	01/01/1970	FGEFRTANKS-S1
EUTANK33-S1	Tank 33, External Floating Roof Tank.	01/01/1976 (install) 01/01/1999 (modify)	FGEFRTANKS-S1
EU29TANK40-S1	Tank 29 T40, External Floating Roof Tank for slop oil in the WWTP.	01/01/2003	FG29TANKS40-41-S1 FGHOUPTANKS-S1 FGEFRTANKS-S1
EU29TANK41-S1	Tank 29 T41, External Floating Roof Tank for slop oil in the WWTP.	01/01/2003	FG29TANKS40-41-S1 FGHOUPTANKS-S1 FGEFRTANKS-S1
EUTANK40-S1	Tank 40, an internal floating roof tank for the storage of petroleum liquids with a true vapor pressure of less than 11 psia. Capacity = 904,680 gallons. Permit: 262-02	01/01/1948 (install) 01/01/1989 (modify)	FGNAPHTHATANKS-S1
EUTANK45-S1	Tank 45, an internal floating roof tank for the storage of volatile organic compounds with a true vapor pressure less than 11 psia. Capacity = 172,368 gallons. Permit: 262-02	01/01/1954	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK46-S1	Tank 46, an internal floating roof tank for the storage of volatile organic compounds with a true vapor pressure less than 11 psia. Capacity = 172,368 gallons. Permit: 262-02	01/01/1954	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK47-S1	Tank 47, an internal floating roof tank for the storage of volatile organic compounds with a true vapor pressure less than 11 psia. Capacity = 172,368 gallons. Permit: 262-02	01/01/1954	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUTANK48-S1	Tank 48, an internal floating roof tank for the storage of petroleum liquids with a true vapor pressure less than 11 psia. Capacity = 371,448 gallons. Permit: 262-02	01/01/1954	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK49-S1	Tank 49, an internal floating roof tank for the storage of Volatile Organic Liquids with a true vapor pressure of less than 11 psia. Capacity = 309,036 gallons. Permit: 262-02	01/01/1954 (install) 01/01/1989 (modify)	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK50-S1	Tank 50, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 1,685,880 gallons. Permit: 262-02	01/01/1954	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK51-S1	Tank 51, an internal floating roof tank for the storage of petroleum liquids with a true vapor pressure less than 11 psia. Capacity= 1,689,660 gallons.	01/01/1967 (install) 01/12/98 (modify)	FGIFRTANKS-S1
EUTANK52-S1	Tank 52, an internal floating roof tank for the storage of petroleum liquids with a true vapor pressure less than 11 psia. Capacity = 988,480 gallons. Permit: 262-02	01/01/1954	FGIFRTANKS-S1 FGGROUP2-S1
EUTANK53-S1	Tank 53 (Device DVTANK53), an internal floating roof tank for the storage of volatile organic liquids with a true vapor pressure less than 11 psia. The floating roof utilizes a mechanical shoe primary seal with rim-mounted secondary seal (per NSPS Kb). Shell height = 52 feet, Vent height= 47 feet, Shell diameter= 100 feet. Capacity= 2,528,400 gallons. Permit: 262-02	05/27/1999	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK54-S1	Tank 54, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 3,049,200 gallons. Permit: 262-02	01/01/1947	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK55-S1	Tank 55, an internal floating roof tank for the storage of petroleum liquids with a true vapor pressure less than 11 psia. Capacity 1,999,200 gallons. Permit: 262-02	01/01/1940	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK56-S1	Tank 56, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 2,110,920 gallons. Permit: 262-02	01/01/1941	FGGROUP2-S1 FGHOUPTANKS-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUTANK57-S1	Tank 57, an internal floating roof tank for the storage of petroleum liquids with a true vapor pressure of 11 psia or less. Capacity = 2,152,080 gallons. Permit: 262-02	01/01/1945	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK58-S1	Tank 58, an internal floating roof tank for the storage of petroleum liquids with a true vapor pressure less than 11 psia. Capacity = 2,058,000 gallons. Permit: 262-02	01/01/1947	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK59-S1	Tank 59, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 2,175,600 gallons. Permit: 262-02	01/01/1948	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK60-S1	Tank 60, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 2,175,600 gallons. Permit: 262-02	01/01/1948	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK61-S1	Tank 61, an internal floating roof tank for the storage of petroleum liquids with a true vapor pressure less than 11 psia. Capacity = 554,190 gallons. Permit: 262-02	01/01/1958	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK62-S1	Tank 62, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 554,190 gallons. Permit: 262-02	01/01/1958	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK63-S1	Tank 63, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 574,770 gallons. Permit: 262-02	01/01/1954	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK64-S1	Tank 64, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 581,196 gallons. Permit 262-02	01/01/1964	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK70-S1	Tank 70, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 972,804 gallons. Permit: 262-02	01/01/1958	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK71-S1	Tank 71, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 972,804 gallons. Permit 262-02	01/01/1958	FGGROUP2-S1 FGHOUPTANKS-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUTANK72-S1	Tank 72, an internal floating roof tank for the storage of petroleum liquids with a true V. P. of less than 11 psia. Capacity = 1,872,780 gallons. Permit: 262-02	01/01/1977	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK87-S4	Tank 87, a pressure vessel for the storage of petroleum hydrocarbons with a true vapor pressure of more than 11 psia. Capacity = 451,038 gallons.	01/01/1976	~~NA~~ FGPVTANKS-S4
EU22-V88-S4	Tank 88, Area 22. A pressure vessel for the storage of petroleum hydrocarbons with a true vapor pressure of more than 1.5 psia. Capacity = up to 126,000 gallons	05/26/16	FGPVTANKS-S4
EU22-V89-S4	Tank 89, Area 22. A pressure vessel for the storage of petroleum hydrocarbons with a true vapor pressure of more than 1.5 psia. Capacity = up to 126,000 gallons	05/26/16	FGPVTANKS-S4
EU22-V90-S4	Tank 90, Area 22. A pressure vessel for the storage of petroleum hydrocarbons with a true vapor pressure of more than 1.5 psia. Capacity = up to 126,000 gallons	05/26/16	FGPVTANKS-S4
EU22-V91-S4	Tank 91, Area 22. A pressure vessel for the storage of petroleum hydrocarbons with a true vapor pressure of more than 1.5 psia. Capacity = up to 126,000 gallons	05/26/16	FGPVTANKS-S4
EU22-V92-S4	Tank 92, Area 22. A pressure vessel for the storage of petroleum hydrocarbons with a true vapor pressure of more than 1.5 psia. Capacity = up to 126,000 gallons	05/26/16	FGPVTANKS-S4
EU22-V93-S4	Tank 93, Area 22. A pressure vessel for the storage of petroleum hydrocarbons with a true vapor pressure of more than 1.5 psia. Capacity = up to 126,000 gallons	05/26/16	FGPVTANKS-S4
EU22-V94-S4	Tank 94, Area 22. A pressure vessel for the storage of petroleum hydrocarbons with a true vapor pressure of more than 1.5 psia. Capacity = up to 126,000 gallons	05/26/16	FGPVTANKS-S4
EU22-V95-S4	Tank 95, Area 22. A pressure vessel for the storage of petroleum hydrocarbons with a true vapor pressure of more than 1.5 psia. Capacity = up to 126,000 gallons	05/26/16	FGPVTANKS-S4

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUTANK96-S4	Tank 96, a pressure vessel for the storage of petroleum hydrocarbons with a true vapor pressure of more than 11 psia. Capacity = 164,136 gallons.	01/01/1959	~~NA~~ FGPVTANKS-S4
EUTANK100-S1	Tank 100, a cone roof tank for the storage of heavy petroleum liquids with a true V. P. of 1.5 psia or less. Capacity = 3,900,540 gallons. Permit: 262-02	01/01/1950	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK101-S1	Tank 101, an internal floating roof tank for the storage of petroleum liquids with a true V.P. of 11 psia or less. Capacity = 3,885,000 gallons. Permit: 262-02	01/01/1952 01/01/2001 Modify	FGIFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK102-S1	Tank 102, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 3,885,000 gallons. Permit: 262-02	01/01/1952	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK103-S1	Tank 103, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 3,885,000 gallons. Permit: 262-02.	01/01/1952	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK104-S1	Tank 104, an internal floating roof tank for the storage of petroleum liquids with a true vapor pressure of 11 psia or less. Capacity = 4,673,550 gallons. Permit: 262-02, 388-07, 63-08E	01/01/1952 11/03/2011	FGGROUP2-S1 FGNAPHTHATANKS-S1 FGIFRTANKS-S1 FGHOUPTANKS-S1 FGDHOUPANNUAL-S1
EUTANK105-S1	Tank 105, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 4,820,130 gallons. Permit: 262-02	01/01/1952	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK106-S1	Tank 106, a cone roof tank for the storage of heavy petroleum liquids with a true V.P of 1.5 psia or less. Capacity = 4,730,670 gallons. Permit: 262-02	01/01/1952	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK107-S1	Tank 107, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 4,732,560 gallons. Permit: 262-02	01/01/1952	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK108-S1	Tank 108, an external floating roof tank for the storage of petroleum liquids with a true V.P. of less than 11 psia. Capacity = 6,396,852 gallons. Permit: 262-02	01/01/1960	FGEFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUTANK109-S1	Tank 109, an external floating roof tank for the storage of petroleum liquids with a true V.P. of less than 11 psia. Capacity = 6,398,658 gallons. Permit: 262-02	01/01/1960	FGEFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK110-S1	Tank 110, an external floating roof tank for the storage of petroleum liquids with a true V.P. of less than 11 psia. Capacity = 6,461,868 gallons. Permit: 262-02	01/01/1960	FGEFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK112-S1	Tank 112, an external floating roof tank for the storage of petroleum liquids with a true vapor pressure of less than 11 psia. Capacity = 8,184,792 gallons. Permit: 262-02	01/01/1966	FGEFRTANKS-S1 FGCRUDETANKS-S1 FGHOUPTANKS-S1
EUTANK113-S1	Tank 113, an external floating roof tank for the storage of petroleum liquids with a true vapor pressure of less than 11 psia. Capacity = 8,105,328 gallons. Permit: 262-02	01/01/1960	FGEFRTANKS-S1 FGCRUDETANKS-S1 FGHOUPTANKS-S1
EUTANK114-S1	Tank 114, an external floating roof tank for the storage of petroleum liquids with a true vapor pressure of less than 11 psia. Capacity = 2,503,116 gallons. Permit: 262-02	01/01/1960	FGEFRTANKS-S1 FGCRUDETANKS-S1 FGHOUPTANKS-S1
EUTANK115-S1	Tank 115, an external floating roof tank for the storage of petroleum liquids with a true vapor pressure of less than 11 psia. Capacity = 2,503,116 gallons. Permit 262-02	01/01/1960	FGEFRTANKS-S1 FGCRUDETANKS-S1 FGHOUPTANKS-S1
EUTANK116-S1	Tank 116, an internal floating roof tank for the storage of petroleum liquids with true vapor pressure less than 11 psia. Capacity = 4,515,000 gallons. Permit: C-6779, 262-02	01/01/1985	FGNAPHTHATANKS-S1 FGIFRTANKS-S1 FGHOUPTANKS-S1
EUTANK120-S1	Tank 120, an internal floating roof tank for the storage of petroleum liquids with a true vapor pressure less than 11 psia. Capacity = 4,743,900 gallons. Permit: 262-02, 63-08E	01/01/1964 04/19/2012	FGGROUP2-S1 FGNAPHTHATANKS-S1 FGIFRTANKS-S1 FGHOUPTANKS-S1 FGDHOUPANNUAL-S1
EUTANK125-S1	Tank 125, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 6,644,800 gallons. Permit: 262-02	01/01/1970	FGGROUP2-S1 FGHOUPTANKS-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUTANK126-S1	Tank 126, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 6,350,400 gallons. Permit: 262-02	01/01/1970	FGGROUP2-S1 FGHOUPTANKS-S1
EUTANK127-S1	Tank 127, an external floating roof for storage of petroleum liquids with a true vapor pressure of 11 psia or less. Capacity = 5,880,000 gallons. Permit: 262-02	01/01/1974	FGGROUP2-S1 FGEFRTANKS-S1 FGNAPTHATANKS-S1 FGHOUPTANKS-S1
EUTANK128-S1	Tank 128, an external floating roof for storage of petroleum liquids with a true V. P. of 11 psia or less. Capacity = 6,209,028 gallons. Permit: 262-02	11/09/2005	FGGROUP2-S1 FGEFRTANKS-S1 FGNAPHTHATANKS-S1 FGHOUPTANKS-S1
EUTANK129-S1	Tank 129, an external floating roof tank for the storage of petroleum liquids with a true V. P. of less than 11 psia. Capacity = 5,033,700 gallons. Permit: 232-02, 262-02	01/01/1989	FGEFRTANKS-S1 FGCRUDETANKS-S1 FGHOUPTANKS-S1
EUTANK130-S1	Tank 130, an external floating roof tank for the storage of petroleum liquids with a true vapor pressure of less than 11 psia. Capacity = 5,688,900 gallons. Permit: 262-02	01/01/1974	FGEFRTANKS-S1 FGCRUDETANKS-S1 FGHOUPTANKS-S1
EUTANK133-S1	Tank 133, a cone roof tank for the storage of asphalt with a true vapor pressure of 0.5 psia or less. This tank has a visible emissions control system. (DVTK133CONTROL) Capacity = 5,893,020 gallons.	01/01/1975 (install) 01/01/1998 (modify)	FGTANKS133&134-S1
EUTANK134-S1	Tank 134, a cone roof tank for the storage of asphalt with a true vapor pressure of 0.5 psia or less. This tank has a visible emissions control system (DVTK134CONTROL). Capacity = 6,308,820 gallons.	01/01/1977 (install) 01/01/1998 (modify)	FGTANKS133&134-S1
EUTANK176-S4	Tank 176, a pressure vessel used for the storage of petroleum liquids with a true vapor pressure of more 11 psia. Capacity = 452214 gallons	01/01/1965	~~NA~~ FGPVTANKS-S4
EUTANK216-S1	Tank 216, an internal floating roof tank for the storage of sour water from EU72-SULRBLOCK2-S1. Capacity = 1,500,000 gallons. Permit: 63-08E	11/05/2012	FGIFRTANKS-S1 FGHOUPTANKS-S1 FGDHOUPANNUAL-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUTANK314-S1	Tank 314, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 2,177,154 gallons. Permit: 262-02	01/01/1968	FGGROUP2-S1
EUTANK315-S1	Tank 315, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 2,177,154 gallons. Permit: 262-02	01/01/1968	FGGROUP2-S1
EUTANK316-S1	Tank 316, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 4,674,096 gallons. Permit: 262-02	01/01/1972	FGGROUP2-S1
EUTANK317-S1	Tank 317, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 8,542,800 gallons. Permit: 262-02	01/01/1972	FGGROUP2-S1
EUTANK318-S1	Tank 318, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 6,771,870 gallons. Permit: 262-02	01/01/1972	FGGROUP2-S1
EUTANK319-S1	Tank 319, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 3,780,000 gallons. Permit: 262-02	01/01/1972	FGGROUP2-S1
EUTANK320-S1	Tank 320, a cone roof tank for the storage of heavy petroleum liquids with a true vapor pressure of 1.5 psia or less. Capacity = 6,771,870 gallons. Permit: 262-02	01/01/1972	FGGROUP2-S1
EUTANK324-S1	Tank 324, a cone roof tank for the storage of heavy petroleum liquids with true vapor pressure less than 0.75 psia. Capacity = 76,734 gallons. Permit: C-7167, 262-02	01/01/1986	FGGROUP2-S1
EUTANK507-S1	Tank 507, an internal floating roof tank for the storage of petroleum liquids with a true vapor pressure of 11 psia or less. Capacity = 193,914 gallons.	01/01/2003	FGIFRTANKS-S1 FGHOUPTANKS-S1
EUTANK508-S1	Tank 508, an internal floating roof tank for the storage of petroleum liquids with a true V.P. of less than 11 psia. Capacity = 350,658 gallons. Permit: C-9941	01/01/1972 (install) 01/01/1993 (modify)	FGIFRTANKS-S1 FGHOUPTANKS-S1

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUTANK530-S1	Tank 530, a small horizontal tank for storage of petroleum liquids with a true vapor pressure less than 11 psia. Capacity = 2,940 gallons.	01/01/1984	FGRULE290-S1
EUTANK601-S1	Tank 601, an external floating roof tank for the storage of wastewater. Capacity = 4,200,000 gallons. Permit: 63-08E	11/05/2012	FGEFRTANKS-S1 FGHOUPTANKS-S1 FGDHOUPANNUAL-S1
EUTANK29T79-S1	Tank 29T79, an internal floating roof tank for the storage of wastewater. Capacity = 3,801,000 gallons. Permit: 245-07B	01/01/2007	FGIFRTANKS-S1
EUTANK22T118-S1	Tank 22T118, an internal floating roof tank. Permit: 245-07B	01/01/2009	FGIFRTANKS-S1
EUETHTANK-S1	Tank 135, Ethanol Tank, an internal floating roof tank for the storage of ethanol. Capacity = 50,000 barrels. Permit: 198-06	01/01/2007	FGIFRTANKS-S1
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

EU04-VACUUM-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Vacuum Unit. Area 4. The vacuum unit separates the reduced crude from the crude unit through the use of a vacuum column. The reduced crude is separated into light vacuum gas oil, medium vacuum gas oil, heavy vacuum gas oil, and a bottoms product called flux. The various fractions are sent to other units in the refinery for further processing. The vacuum unit consists of process vessels (including heat exchangers and vacuum column), process heater, tanks, containers, 2 cooling towers, flare, compressors, pumps, piping drains, and various components (pumps and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.). Other EU's have been created to address individual pieces of equipment within the vacuum unit that have specific applicable requirements. Permit: 262-02

Flexible Group IDs: FGPROCUNITS-S1, FGDHOUPANNUAL-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not cause or allow the emission of any volatile organic compound from condensers, hot wells, or accumulators of any existing vacuum-producing system at the petroleum refinery, unless such emission is controlled by one of the following methods **(R 336.1615(1)(a-c))**:
   a. Capture and disposal in a fuel gas system.
   b. Combustion in a smokeless flare.
   c. Any method approved by the Division that recovers no less than 90%, by weight, of the uncontrolled volatile organic compounds that would otherwise be emitted into the atmosphere.

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU08-GOHT-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Gas Oil Hydrotreater Unit: Area 8. Reacts sour gas oil streams with hydrogen over a catalyst bed to remove sulfur. The GOHT unit consists of process vessels (reactors, distillation tower, absorbing towers, stripper tower) and two charge heaters, cooling tower, flare, compressors, pumps, piping, drains, & various components (pumps & compressor seals, process valves, pressure relief valves, flanges, connectors, etc.). Other EU's were created to address individual pieces of equipment within this unit that have specific applicable requirements.
~~Permit: 262-02, 63-08D, 118-15~~

Flexible Group IDs: FGPROCUNITS-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii)~~(iii)~~)**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii)~~(iii)~~)**

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall implement a program to monitor at least 90 percent of the flanges and connectors in gas/vapor and light liquid VOC service in EU08-GOHT-S1. The program shall meet the following requirements. **(R 336.1205, R 336.1225, R 336.1702(a))**

a. Monitoring shall be conducted on a quarterly basis, using test methods and procedures described in Appendix 5-S1 of Renewable Operating Permit No. MI-ROP-A9831-2012b.
b. A leak shall be defined as an instrument reading of 500 ppm or greater, as specified in NSPS Subpart VVa.
c. Flanges and connectors may be excluded from the monitoring program if they are "unsafe to monitor" as defined in 40 CFR 60.482-7(g)(1), or "difficult to monitor" as defined in 40 CFR 60.482-7(h)(1).
d. Permittee shall maintain records utilizing the procedures in Appendix 4-S1 of Renewable Operating Permit No. MI-ROP-A9831-2012b.

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

EU11-FCCU-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Fluid Catalytic Cracking Unit. Area 11. The FCCU converts heavier hydrocarbons to lighter products in the presence of a catalyst. In the process coke is deposited on the catalyst. The spent catalyst is moved to the regenerator (11-V1) where the coke is burned off using air. The regenerator is equipped with cyclones to capture catalyst (11-V1CYCLONES). The hot flue gas from the regenerator is directed to a flue gas cooler where heat is recovered as steam. Before exiting the stack, the flue gas passes through Electrostatic Precipitators (ESPs). The FCCU consists of process vessels (reactor, regenerator, fractionators, knock-out pots, and strippers) heater, tanks, containers, 2 cooling towers, compressors, pumps, piping, drains, and various components (pumps, and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.). Other EUs have been created to address equipment that has specific applicable requirements. Permit: 28-02A, 262-02, 175-06, 81-12, 63-08E

Flexible Group IDs: FGPROCUNITS-S1, FGDHOUPANNUAL-S1, FGTIER3SO2-S1

POLLUTION CONTROL EQUIPMENT

Cyclone, Electrostatic Precipitator (ESP), Ammonia Injection

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate Matter	0.8 pounds per thousand pounds of coke burn off in the regenerator[2a]	3 hour rolling average basis	EU11-FCCU-S1	SC V.1, SC VI.10	**40 CFR 63.1564, 40 CFR 60.102a(b)(1)(i)**
2. PM10	1.1 pounds per thousand pounds of coke burn off in the regenerator[2]	3 hour rolling average basis	EU11-FCCU-S1	SC V.1, SC VI.10	**R 336.1205, R 336.2802, 40 CFR 52.21**
3. Carbon Monoxide	500 ppmv[2]	1-hour block average, dry gas basis and 0% oxygen	EU11-FCCU-S1	SC VI.2, SC VI.7	**R 336.2810(3), R 336.2804, 40 CFR 52.21(d), 40 CFR 63.1565, 40 CFR 60.102a(b)(4)**
4. Sulfur Dioxide	50 ppmv[2b]	Based upon 7 day rolling average, dry gas basis and 0% oxygen	EU11-FCCU-S1	SC VI.2, SC VI.6	**R 336.2802, 40 CFR 52.21, 55 FR 11029, 40 CFR 60.102a(b)(3), Consent Order No. 01-40119**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
5. Sulfur Dioxide	25 ppmv[2b]	Based upon 365 day rolling average, dry gas basis and 0% oxygen	EU11-FCCU-S1	SC VI.2, SC VI.6	**R 336.2802, 40 CFR 52.21, 55 FR 11029, 40 CFR 60.102a(b)(3), Consent Order No. 01-40119**
6. NOx	80 ppmv[2b]	Based upon 7 day rolling average, dry gas basis and 0% oxygen	EU11-FCCU-S1	SC VI.2, SC VI.8	**R 336.1801, 40 CFR 52.21, 55 FR 11029, 40 CFR 60.102a(b)(2), Consent Order No. 01-40119**
7. NOx	70 ppmv[2]	Based upon 365 day rolling average, dry gas basis and 0% oxygen	EU11-FCCU-S1	SC VI.2, SC VI.8	**R 336.1801, R 336.1201(3) 40 CFR 52.21, 55 FR 11029**
8. Volatile Organic Compounds	21 tpy[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU11-FCCU-S1	SC V.2, SC VI.9	**R 336.1702(a)**

[a] Compliance with this particulate matter limit shall be considered compliance with the limits of 40 CFR 60. 102a(b)(1)(i), which have been subsumed under this streamlined requirement.

[b] Compliance with these SO_2 and NOx limits shall be considered in compliance with the limits of Consent Order No. 01-40119, which have been subsumed under this streamlined requirement.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU11-FCCU-S1 unless the electrostatic precipitator is installed, maintained, and operated in a satisfactory manner. Satisfactory operation is described in the Startup, Shutdown and Malfunction Plan.[2] **(40 CFR Part 63, Subparts A and UUU, R 336.1910)**

2. The permittee shall install a permanent ammonia injection system to reduce emissions of particulate matter and oxides of nitrogen from the FCCU.[3] **(R 336.1201(3), R 336.1910)**

3. The permittee shall not inject ammonia into the EU11-FCCU-S1 exhaust unless an operation plan for ammonia injection (NH3 Injection Plan) is implemented and maintained, and is amended based on stack test results and operational experience. At a minimum, the NH3 Injection Plan shall address all the issues listed below. The permittee shall also amend the interim NH3 Injection Plan within 45 days if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the NH3 Injection Plan and any amendments to the NH3 Injection Plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the NH3 Injection Plan or amended NH3 Injection Plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.[2] **(R 336.1901, R 336.1910)**
   a. Ammonia emissions from EU11-FCCU-S1 due to ammonia injection.
   b. Operational practices that interact with ammonia injection to increase PM emissions.

c. Establishing operating parameters that ensure compliance with all emission limits for EU11-FCCU-S1 under all normal operating scenarios.
d. Identifying how the operating parameters established according to SC III.3.c will be monitored, at what frequency, and how the data will be recorded.
e. Maintenance practices required to ensure that the ammonia injection operates in a satisfactory manner.
f. Emission limitations for particulate matter, oxides of nitrogen, and ammonia slip.[3]

4. The permittee shall conduct all necessary maintenance, consistent with the NH3 Injection Plan, to keep all components of the ammonia injection system operating in a satisfactory manner at all times.[2] **(R 336.1901, R 336.1910)**

5. The three hour rolling average total power and secondary current to the entire system must not fall below the level established during the most recent performance test.[2] **(R336.1910, 40 CFR 60.102a(c)(1)(i))**

6. The daily average exhaust coke burn-off rate must not exceed the level established during the most recent performance test.[2] **(R336.1910, 40 CFR 60.102a(c)(1(ii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Annually, the permittee shall verify emission rates from EU11-FCCU-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. For verification of PM emissions, testing shall include both the filterable and condensable fractions. For verification of PM emissions, Method 5B or 5F shall be used.[2] **(R 336.2001, R 336.2003, R 336.2004)**
   PM10[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**
   PM[2] **(R 336.1205, 40 CFR 63.1564, 40 CFR Part 63, Subpart UUU, 40 CFR 60.104a(b))**
   VOC[3] **(R 336.1201(3))**
   Sulfuric acid mist (For verification of sulfuric acid mist emissions, testing shall use the controlled condensation method.)[3] **(R 336.1201(3))**

2. Once during the five year term of this permit, the permittee shall determine the VOC emission rates from EU11-FCCU-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Determination of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. Test results shall be used to calculate emissions for compliance with I.8.[2] **(R 336.1702, R 336.2001, R 336.2003, R 336.2004)**

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall install, calibrate, maintain, and operate a continuous monitoring system for the measurement of opacity from EU11-FCCU-S1.[2] **(R 336.2103(1), Paragraph 16 of Consent Decree 01-40119, 40 CFR Part 63, Subparts A and UUU)**

2. The permittee shall install, calibrate, maintain, and operate CEMS for measuring NOx, CO, CO_2, SO_2, and Oxygen from EU11-FCCU-S1 on a continuous basis. The permittee shall install, certify, calibrate, maintain, and operate the CEMS in accordance with the requirements of 40 CFR 60.11, 40 CFR 60.13, and 40 CFR, Part 60, Appendix

A the applicable performance specification test of 40 CFR Part 60, Appendices B and F. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report.[2] **(40 CFR Part 60, Subpart Ja)**

3. The permittee shall keep records of the process unit charge rate on a daily basis for EU11-FCCU-S1.[2] **(R 336.1331(1)(e))**

4. The permittee shall keep records of average coke burn off rate in 1000 pounds per hour on a daily basis for EU11-FCCU-S1.[2] **(40 CFR Part 60, Subparts A and Ja, 40 CFR Part 63, Subparts A and UUU)**

5. The permittee shall keep records of hours of operation on a daily basis for EU11-FCCU-S1.[2] **(40 CFR Part 60, Subparts A and Ja, 40 CFR Part 63, Subparts A and UUU)**

6. The permittee shall keep records of SO_2 emissions on a continuous basis from the CEM for EU11-FCCU-S1.[2] **(40 CFR Part 60, Subparts A and Ja)**

7. The permittee shall keep records of CO emissions on a continuous basis from the CEM for EU11-FCCU-S1.[2] **(40 CFR Part 60, Subparts A and Ja, 40 CFR Part 63, Subparts A and UUU)**

8. The permittee shall keep records of NOx emissions on a continuous basis from the CEM for EU11-FCCU-S1.[2] **(R 336.1205, R 338.2802, 40 CFR 52.21, 55 FR 11029, 40 CFR Part 60, Subparts A and Ja, Consent Order No. 01-40119)**

9. The permittee shall calculate the VOC emission rates from EU11-FCCU-S1 for each calendar month and 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1702(a))**

10. The permittee shall calculate the PM and PM10 emission rates from EU11-FCCU-S1 per 1,000 lb of coke burn off using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, 40 CFR Part 60, Subparts A and Ja, 40 CFR Part 63, Subparts A and UUU)**

11. The permittee shall keep, in a satisfactory manner, the following records on a monthly basis for bypass lines in EU11-FCCU-S1.[2] **(40 CFR Part 63, Subparts A and UUU)**
    a. Visually inspect the seal or closure mechanism.
    b. Is the bypass line maintained in the closed position?
    c. Is flow present in the bypass line?

12. The permittee shall monitor and record, in a satisfactory manner, the operating parameters identified in the approved NH_3 Injection plan on the frequency described in the approved plan.[2] **(R 336.1901, R 336.1910)**

13. The permittee shall use continuous parameter monitor systems to measure and record the hourly average total power input and secondary voltage to the entire system.[2] **(R 336.1910, 40 CFR 60.105a(b)(1)(i))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVFCCU	60[2]	195[2]	**R 336.1225, R 336.1226(d), R 336.2804, 40 CFR 52.21(d)**

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Ja, as they apply to EU11-FCCU-S1.[2] **(40 CFR Part 60, Subparts A and Ja)**

2. Each owner or operator required to install a continuous monitoring device shall submit excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and-or summary report form (see 40 CFR 60.7(d)) to the Department semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Department, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:[2] **(40 CFR 60.7c)**
   a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.
   b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
   c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
   d. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted such information shall be stated in the report.

3. The permittee shall comply with all applicable reporting requirements in 40 CFR 60.7.[2] **(40 CFR 60.7)**

4. The permittee shall maintain a file of all information reported in the semi-annual reports and all other data collected, either by continuous monitoring system or as necessary to convert monitoring data to the units of the applicable standard, for a minimum of five years from the date of collection of such data or submission of such reports. **(R 336.1201(3))**

5. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and UUU, as they apply to EU11-FCCU-S1.[2] **(40 CFR Part 63, Subparts A and UUU)**

6. The permittee shall not operate EU11-FCCU-S1 unless an approved Start up, Shutdown, Malfunction Plan (SSMP), or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. The plan shall include procedures for maintaining and operating in a satisfactory manner, EU11-FCCU-S1, add-on air pollution control device, or monitoring equipment during malfunction events, and a program for corrective action for such events. If the SSMP fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the malfunction abatement plan within 45 days after such an event occurs.[2] **(40 CFR Part 63 Subparts A and UUU)**

7. Along with the Notification of Compliance Status report, the permittee shall submit to the AQD District Supervisor, an approvable Operation, Maintenance and Monitoring plan (OMMP). The permittee shall not operate EU11-FCCU-S1 unless the approved OMMP, or an alternate plan approved by the AQD District Supervisor, is implemented. The plan shall contain all information required by 40 CFR 63.1564(a)(3).[2] **(40 CFR Part 63, Subparts A and UUU)**

8. The permittee is prohibited from using NOx emission reductions that resulted from the successful operation of EU11-FCCUS1 through the use of NOx Reducing Catalyst Additives required by Consent Decree No. 01-40119, as amended, and by the November 2005 First Revised Consent Decree, as modified, (*Civ. No. 4:01-CV-40119-PVG)*, for the purpose of netting reductions or emission offsets. No other restrictions on otherwise available netting credits exist as a result of the above referenced decree.[3] **(R 336.1201(3))**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).
[3] This condition is included at the request of the permittee.

EU14-CCRPLCATREG-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

CCR Platformer Catalyst Regeneration. Area 14. Platformer catalyst is continuously regenerated on site. Any emissions generated from this operation are routed to the Platformer Charge Heater or vented to the atmosphere through an exhaust stack

Flexible Group ID: FGDHOUPANNUAL-S1

POLLUTION CONTROL EQUIPMENT

Total Organic Compounds: CCR Platformer Charge Heater; Hydrogen Chloride: Chlorsorb™ System

I. EMISSION LIMIT(S)

1. Using a control device, the permittee shall reduce uncontrolled emissions of total organic compounds (TOC) from EU14-CCRPLCATREG-S1 by 98% by weight or to a concentration of 20 ppmv (dry basis), corrected to 3% oxygen, whichever is less stringent, on an instantaneous basis. If the permittee vents emissions to a boiler or process heater to comply with percent reduction or concentration emission limitation, the vent stream must be introduced into the flame zone, or any other location that will achieve the percent reduction or concentration standard, as required by SC III.1.[2] **(40 CFR 63.1566(a)(1)(ii))**

2. The permittee shall reduce uncontrolled emissions of hydrogen chloride by 97% by weight or to a concentration of 10 ppmv (dry basis), corrected to 3% oxygen, based on three one-hour tests. Compliance will be determined by SC III.2, SC V.1, SC VI.1, SC VI.2, and SC VI.3.[2] **(40 CFR 63.1567(a)(1))**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall introduce the regenerator vent gas streams from EU14-CCRPLCATREG-S1 into the flame zone of a boiler or process heater with a design heat input capacity of 44 MW or greater. Satisfactory operation is described in the Startup, Shutdown, and Malfunction Plan. **(40 CFR 63.1566(a)(1)(ii), R 336.1213(3))**

2. The daily average temperature of the gas entering or exiting the adsorption system on EU14-CCRPLCATREG-S1 must not exceed the limit established during the performance test; and the weekly average chloride level on the sorbent entering the adsorption system must not exceed the design or manufacture's recommended limit (1.35 weight percent for the Chlorsorb™ System); and the weekly average chloride level on the sorbent leaving the adsorption system on EU14-CCRPLCATREG-S1 must not exceed the design or manufacturer's recommend limit (1.8 weight percent for the Chlorsorb™ System). **(40 CFR 63.1567(a)(2))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Once during the five years of this permit, the permittee shall verify the hydrogen chloride emission rates from EU14-CCRPLCATREG-S1, by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1213(3))**

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor and record the hourly and daily average temperature of the gas entering or exiting the adsorption system on EU14-CCRPLCATREG-S1 during coke burn-off and catalyst rejuvenation. **(R 336.1213(3), 40 CFR 63.1567(c)(1))**

2. The permittee shall demonstrate continuous compliance during coke burn-off and catalyst rejuvenation by collecting samples of the sorbent entering the adsorption system on EU14-CCRPLCATREG-S1 three times per week (on non-consecutive days); and analyzing the samples for total chloride; and determining and recording the weekly average chloride concentration; and maintaining the chloride concentration below the design or manufacturer's recommended limit (1.35 weight percent for the Chlorsorb™ System). **(R 336.1213(3), 40 CFR 63.1567(c)(1))**

3. The permittee shall demonstrate continuous compliance during coke burn-off and catalyst rejuvenation by collecting samples of the sorbent exiting the adsorption system on EU14-CCRPLCATREG-S1 three times per week (on non-consecutive days); and analyzing the samples for total chloride concentration; and determining and recording the weekly average chloride concentration; and maintaining the chloride concentration below the design or manufacturer's recommended limit (1.8 weight percent for the Chlorsorb™ System). **(R 336.1213(3), 40 CFR 63.1567(c)(1))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV14-CATREGEN	6[1]	195[1]	**R 336.1225**

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of 40 CFR Part 63, Subpart A and UUU National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units. **(R 336.1213)(3), 40 CFR Part 63, Subparts A and UUU)**

2. The permittee shall prepare an Operation, Maintenance, and Monitoring Plan according to the requirements in 40 CFR 63.1574(f) and operate at all times according to the procedures in the plan. **(40 CFR Part 63, Subpart UUU)**

3. The permittee shall develop and implement a written Startup, Shutdown, and Malfunction Plan according to the requirements in 40 CFR 63.6(e)(3). **(40 CFR 63.6)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU21-S2OFFGAS-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Disulfide separator off-gas at the Cracking Plant Treater. Area 21. The separator off-gas (DV21-V33) is normally routed to the FCCU charge heater (DV11-H1). It is also routable to the FCCU flare (DV25-FS).

Flexible Group IDs: FGPROCVENTS-S1, FGDHOUPANNUAL-S1

POLLUTION CONTROL EQUIPMENT

Flare, Process Heater

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Hydrogen sulfide	0.10 gr/dscf (230 mg per dscm or 162 ppm)[2*]	As noted in applicable AMP	EU21-S2OFFGAS-S1	SC V.1	**40 CFR 60.104(a)(1), R 336.1406(1), R 336.1213**

*Compliance with this limit shall be considered compliance with the limits of R 336.1406(1) which have been subsumed under this streamlined requirement.

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Twice a year, with a minimum of 3 months between samples, the permittee shall test the hydrogen sulfide concentration in the disulfide off-gas using a gas detector tube or equivalent method. **(R 336.1213(3))**

2. Each time the mercaptan concentration of the regular #3 Merox caustic reaches or exceeds 1000 ppm, the permittee shall test the hydrogen sulfide concentration in the disulfide off-gas using a gas detector tube or equivalent method. **(R 336.1213(3))**

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. Hydrogen sulfide concentrations results are to be reported in the Refinery's quarterly emissions monitoring system (CEMS) reports. **(40 CFR 60.104(a)(1), 40 CFR 60.13(i)**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements in the 40CFR 60 Subpart J/Ja Alternative Monitoring Plan approval letter for this stream from U.S. EPA.

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU22-ASPHLOAD-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Asphalt loading facility. Area 22. This group consists of a six spot railcar loading rack and associated equipment (e.g.: piping, valves, pumps, and loading arms).

Flexible Group ID: FGASPHALTLOADING-S1/S2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	5.7 tpy[2]	Rolling 12-month time period as determined at the end of each calendar month	EU22-ASPHLOAD-S1	SC VI.2, SC VI.3	**R 336.1702(a)**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Asphalt cement loaded	300,000,000 gpy[2]	Rolling 12-month time period as determined at the end of each calendar month	EU22-ASPHLOAD-S1	SC VI.3	**R 336.1225, R 336.1702(a)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall limit the maximum throughput capacity of each railcar loading spot in EU22-ASPHLOAD-S1 to 25,200 gallons per hour.[1] **(R 336.1225, R 336.1901)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1225, R 336.1702(a))**

2. The permittee shall calculate the VOC emission rate from EU22-ASPHLOAD-S1 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[2] **(R 336.1702(a))**

3. The permittee shall record the amount of asphalt cement loaded for EU22-ASPHLOAD-S1 monthly, for the preceding 12-month rolling time period, in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[2] **(R 336.1225, R 336.1702(a))**

4. The permittee shall keep, in a satisfactory manner, a record of the specifications of the pumps that transfer material at EU22-ASPHLOAD-S1 and an analysis showing the maximum throughput capacity for EU22-ASPHLOAD-S1. The permittee shall keep the record on file at the facility and make it available to the Department upon request.[1] **(R 336.1225, R 336.1901)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-ASPHRAIL1[a]	Not restricted	34.5[2]	**R 336.1225 R 336.2803, R 336.2804**
2. SV-ASPHRAIL2[a]	Not restricted	34.5[2]	**R 336.1225 R 336.2803, R 336.2804**
3. SV-ASPHRAIL3[a]	Not restricted	34.5[2]	**R 336.1225 R 336.2803, R 336.2804**
4. SV-ASPHRAIL4[a]	Not restricted	34.5[2]	**R 336.1225 R 336.2803, R 336.2804**
5. SV-ASPHRAIL5[a]	Not restricted	34.5[2]	**R 336.1225 R 336.2803, R 336.2804**
6. SV-ASPHRAIL6[a]	Not restricted	34.5[2]	**R 336.1225 R 336.2803, R 336.2804**
[a] Vent discharges horizontally.			

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU22-MELVLPGRAILRACK-S4
EMISSION UNIT CONDITIONS

DESCRIPTION

LPG Railcar Loading Facility. Area 22. This LPG railcar loading facility is located within the refinery. The group includes all equipment (i.e. piping, vessels, valves, pumps, and loading arms) associated with the LPG loading racks in the Melvindale tank farm. For the purposes of this permit, LPG means a material in liquid form that is composed predominantly of any of the following hydrocarbons or their mixtures: propane, propylene, butane, isobutane, butylenes, and C3-C4 mixtures. Excess hydrocarbons in loading hoses after railcar loadings, are directed to the Unifiner Flare for combustion for control.

Flexible Group IDs: FGPROCUNITS-S1, FGDHOUPANNUAL-S1

POLLUTION CONTROL EQUIPMENT

UNIFINER FLARE

I. EMISSION LIMIT(S)

NA

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	0.7lbs of organic vapor/ 1000 gallons loaded[2]	Instantaneous	EU22-LPGRAILRACK-S1	SC IV.1, SC IV.2	R 336.1609(2)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

1. The permittee shall only fill railcars with LPG using a pressurized loading system that does not allow organic vapor to be displaced from the railcar during loading. **(R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

The permittee shall not allow the loading of any organic compound that has a true vapor pressure of more than 1.5 psia at actual conditions from any stationary vessel into any delivery vessel located at an existing loading facility and which has a throughput of 5,000,000 or more gallons of such compounds per year unless such delivery is controlled by a system that captures all displaced organic vapor and air by means of a vapor-tight collection line and recovers the organic vapor such that emissions to the atmosphere do not exceed 0.7 pounds of organic vapor per 1,000 gallons of organic compounds loaded. **(R 336.1609(2))**

1. The permittee shall ensure that the railcar is equipped, maintained and controlled with all of the following:
   a. Pressure-vacuum relief valves that are vapor-tight and set to prevent the emission of organic vapor during the loading of the railcar, except under emergency conditions. **(Rule 702(a))**
   b. Hatch openings that are kept closed and vapor-tight during the loading of the railcar. **(Rule 702(a))**

1.2. The permittee shall ensure that the ~~delivery~~ loading vessel is equipped, maintained and controlled with all of the following:

a. A device to ensure that the loading device shall close upon disconnection so as to prevent the release of organic vapor. **(R 336.1702(a))** ~~An interlocking system or procedure to ensure that the vapor-tight collection line is connected before any organic compound can be loaded. **(R 336.1609(3)(a))**~~

b. A device to direct excess hydrocarbons in loading hoses after railcar loadings to the Unifiner Flare for combustion for control. **(R 336.1702(a))** ~~A device to ensure that the vapor-tight collection line shall close upon disconnection so as to prevent the release of organic vapor. **(R 336.1609(3)(b)**~~

~~c. A device to accomplish complete drainage before the loading device is disconnected or a device to prevent liquid drainage from the loading device when not in use. **(R 336.1609(3)(c))**~~

~~d. Pressure-vacuum relief valves that are vapor-tight and set to prevent the emission of displaced organic vapor during the loading of the delivery vessel, except under emergency conditions. **(R 336.1609(3)(d))**~~

~~e. Hatch openings that are kept closed and vapor-tight during the loading of the delivery vessel. **(R 336.1609(3)(e))**~~

2.3. The permittee shall not operate EU22-MELVLPGRAILRACK-S4 unless a high pressure shutdown system to minimize VOC emissions from the pressurized filling of railcars is installed, maintained, and operated in a satisfactory manner. **(R 336.1702(a))** ~~develop written procedures for the operation of all such control measures. Such procedures shall be posted in an accessible, conspicuous location near the loading service. **(R 336.1609(4))**~~

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

~~**See Appendix 5-S1**~~

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VII. REPORTING

NA

~~1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**~~

~~2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**~~

~~3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**~~

~~**See Appendix 8-S1**~~

VIII. STACK/VENT RESTRICTION(S)

NA

~~The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:~~

~~Stack & Vent ID~~	~~Maximum Exhaust Dimensions (inches)~~	~~Minimum Height Above Ground (feet)~~	~~Underlying Applicable Requirements~~
~~NA~~	~~NA~~	~~NA~~	~~NA~~

IX. OTHER REQUIREMENT(S)

~~NA~~

1. The permittee shall develop written procedures for the operation of all emission control measures. Such procedures shall be posted in an accessible, conspicuous location near the loading device. **(R 336.1702(a))**

2. The permittee shall implement a program to monitor at least 90 percent of the flanges and connectors in gas/vapor and light liquid VOC service in EU22-MELVLPGRAILRACK-S4. The program shall meet the following requirements. **(R 336.1205, R 336.1225, R 336. 1702(a))**
   a. Monitoring shall be conducted on a quarterly basis, using test methods and procedures described in Appendix 5-S1 of Renewable Operating Permit No. MI-ROP-A9831-2012c.
   b. A leak shall be defined as an instrument reading of 500 ppm or greater, as specified in NSPS Subpart VVa.
   c. Flanges and connectors may be excluded from the monitoring program if they are "unsafe to monitor" as defined in 40 CFR 60.482-7(g)(1), or "difficult to monitor" as defined in 40 CFR 60.482-7(h)(1).
   d. Permittee shall maintain records utilizing the procedures in Appendix 4-S1 of Renewable Operating Permit No. MI-ROP-A9831-2012c.

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU22-PENTLOAD-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Loading facility for pentane/butane. Area 22. This group consists of a six spot rail car loading rack and associated equipment (e.g., piping, valves, pumps, and loading arms). The equipment is also used to unload ethanol from railcars into EUETHTANK. The ethanol-related requirements reside in EUETHTANK. Permit: 54-13

Flexible Group ID: FGPROCUNITS-S1

POLLUTION CONTROL EQUIPMENT

Closed system transfers to railcars from EUTANK176; Vapors purged from any railcar are routed to the Unifiner flare (DV07-FS2) for combustion.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	1.00 tpy[A]	Rolling 12-month time period as determined at the end of each calendar month	EU22-PENTLOAD-S1	SC VI.1	**R 336.1702(a)**

[A] This emission limit includes emissions from the Unifiner flare (DV07-FS2) due to purging vapors from railcars

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Total material transferred to railcars from EUTANK176	60,000,000 gpy	Rolling 12-month time period as determined at the end of each calendar month	EU22-PENTLOAD-S1	SC VI.3	**R 336.1702(a)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall operate EU22-PENTLOAD-S1 as a closed system during transfer to railcars from EUTANK176, with no emissions to the atmosphere during normal operation other than those listed below: **(R 336.1702(a), R 336.1702(b))**
   a. Fugitive emissions from leaking components
   b. Emissions from combustion of the vapors purged from railcars

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall calculate the VOC emission rate from EU22-PENTLOAD-S1 that are identified in SC I.1 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1702(a))**

2. The permittee shall keep, in a satisfactory manner, a daily log that records each incident of purging material to flare from EU22-PENTLOAD-S1. Each log entry shall include the date of the incident and the amount of material purged to flare during the incident. The permittee shall keep the log on file at the facility and make it available to the Department upon request. **(R 336.1702(a))**

3. The permittee shall monitor and record, in a satisfactory manner, the volume of material transferred from EUTANK176 to railcars with EU22-PENTLOAD-S1 on a monthly and 12-month rolling time period basis. **(R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU27-ZURNBOILER-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Zurn Boiler. Area 27. Capacity: 210 MMBTU/hr. Fuel: Natural gas. Permit: C-9022, 63-08E

Flexible Group IDs: FG-BOILERS, FGDHOUPANNUAL-S1

POLLUTION CONTROL EQUIPMENT

Multi-staged Low NOx Burner

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO_x	0.08 lb/MMBTU[3,a] ~~0.20 lb/MMBTU[2]~~	Annual rolling average as determined at the end of each calendar month	EU27-ZURNBOILER-S1	SC VI.1	R 336.1201(3) ~~40 CFR 60.44b~~
2. CO	0.10 lb/MMBTU[2]	Annual rolling average as determined at the end of each calendar month	EU27-ZURNBOILER-S1	SC VI.2	**R 336.1201(3)**
3. PM	0.0019 lb/MMBTU[2]	Three-hour average	EU27-ZURNBOILER-S1	SC V.2	**R 336.1205, R 336.2802, 40 CFR 52.21**
4. PM	0.0076 lb/MMBTU[2]	Three-hour average	EU27-ZURNBOILER-S1	SC V.1	**R 336.1205, R 336.2802, 40 CFR 52.21**
5. VOC	0.0055 lb/MMBTU[2]	Three-hour average	EU27-ZURNBOILER-S1	SC V.4	**R 336.1205, R 336.1702(a)**

[a] This emission limit applies upon startup of EU08-GOHTCHARHTR2-S1 or the new reactor in EU08-GOHT-S1, whichever occurs first.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural Gas	210,000 cubic feet per hour based on 1,000 BTU/cubic foot[2]	Hourly	EU27-ZURNBOILER-S1	SC VI.5	**R 336.1205, R 336.2802, 40 CFR 52.21**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only burn natural gas as fuel for EU27-ZURNBOILER-S1[2] **(R 336.1201(3))**

2. The heat input capacity of EU27-ZURNBOILER-S1 shall not exceed a maximum of 210 MM Btu per hour.[2] **(R 336.1201(3))**

3. ~~The permittee shall not operate EU27-ZURNBOILER-S1 unless the multi-staged low NOx burners are installed and operating properly.[2] (R 336.1201(3))~~

4. The permittee shall not operate EU27-ZURNBOILER-S1 unless the low NOx burners are installed and operating properly. Installation shall be completed prior to startup of EU08-GOHTCHARHTR2-S1 or the new reactor in EU08-GOHT-S1, whichever occurs first.[3] **(R 336.1201(3))**

5. The permittee shall install a flue gas recirculation system on EU27-ZURNBOILER-S1 to meet the emission limit in SC I.1 above. Installation shall be completed prior to startup of EU08-GOHTCHARHTR2-S1 or the new reactor in EU08-GOHT-S1, whichever occurs first. The flue gas recirculation system shall be operated and maintained in a manner consistent with the manufacturer's guidelines.[3] **(R 336.1201(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Once during the five year term of this permit and every five years thereafter the permittee shall verify PM10 emission rates from EU27-ZURNBOILER-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. For a test conducted prior to commencement of trial operation of the heavy oil upgrade project, the test plan shall demonstrate that test conditions will be representative of post-startup conditions. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. For verification of PM emissions, testing shall include both the filterable and condensable fractions.[2] **(R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c-d))**

2. Once during the five year term of this permit and every five years thereafter, the permittee shall verify PM emission rates from EU27-ZURNBOILER-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. For a test conducted prior to commencement of trial operation of the heavy oil upgrade project, the test plan shall demonstrate that test conditions will be representative of post-startup conditions. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205, R 336.2001, R 336.2003, R 336.2004)**

3. Annually, the permittee shall verify PM emission rates from EU27-ZURNBOILER-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[3] **(R 336.1201(3))**

4. Once during the five year term of this permit and every five years thereafter, the permittee shall verify VOC emission rates from EU27-ZURNBOILER-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205, R 336.1702, R 336.2001, R 336.2003, R 336.2004)**

5. Annually, the permittee shall verify VOC emission rates from EU27-ZURNBOILER-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[3] **(R 336.1201(3))**

6. Annually, the permittee shall verify sulfuric acid mist emission rates from EU27-ZURNBOILER-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[3] **(R 336.1201(3))**

7. For tests required by SC V.1 through SC V.5, the following applies for valid, regularly scheduled tests, conducted during normal operations:[3] **(R 336.1201(3))**
   a. If a test indicates non-compliance with a permitted emission rate, and the test is required to be conducted on either a three or five year cycle, the frequency of such tests shall be annual for two consecutive years. Following two consecutive years of compliance, the frequency of testing shall return to the original three or five year cycle.

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NO_X and oxygen emissions from EU27-ZURNBOILER-S1 on a continuous basis. The permittee shall install and operate the Continuous Emission Monitoring System (CEMS) in accordance with the requirements of 40 CFR 60.11, 40 CFR 60.13, and 40 CFR Part 60, Appendix A, the applicable performance specification test of 40 CFR Part 60, Appendices B and F; With respect to 40 CFR Part 60, Appendix F in lieu of the requirements of 40 CFR Part 60, Appendix F(5.1.1, 5.1.3, and 5.1.4) the permittee shall conduct either a Relative Accuracy Audit (RAA) or a Relative Accuracy Test Audit (RATA) once every twelve (12) calendar quarters, provided that a Cylinder Gas Audit is conducted each calendar quarter. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, 40 CFR Part 60, Subparts A and Db, 40 CFR 60.48b)**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the CO and oxygen emissions from EU27-ZURNBOILER-S1 on a continuous basis. The permittee shall install and operate the CEMS in accordance with the requirements of 40 CFR 60.11, 40 CFR 60.13, and 40 CFR, Part 60, Appendix A, the applicable performance specification test of 40 CFR Part 60, Appendices B and F; With respect to 40 CFR Part 60, Appendix F, in lieu of the requirements of 40 CFR Part 60, Appendix F(5.1.1, 5.1.3, and 5.1.4), the permittee shall conduct either a Relative Accuracy Audit (RAA) or a Relative Accuracy Test Audit (RATA) once every twelve (12) calendar quarters, provided that a Cylinder Gas Audit is conducted each calendar quarter. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

3. The permittee shall monitor emissions and operating information for EU27-ZURNBOILER-S1 in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Db.[2] **(R 336.1205, 40 CFR Part 60, Subparts A and Db)**

4. The permittee shall keep records of emissions and operating information to comply with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Db. The permittee shall keep all source emissions data and operating information on file at the facility and make them available to the Department upon request.[2] **(R 3361205, 40 CFR Part 60 Subparts A and Db)**

5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas rate in EU27-ZURNBOILER-S1 on an hourly basis. Each day, the permittee shall determine the heat input rate to EU27-ZURNBOILER-S1 for the previous operating day.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV22-BR7	72[1]	150[1]	**R 336.1225**

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart A-General Provisions, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units as they apply to EU27-ZURNBOILER-S1.[2] **(40 CFR Part 60 Subparts A and Db)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).
[3] This condition is included at the request of the permittee.

EU27-B&WBOILER1-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Gas-fired boiler, capacity: 220,000 pounds steam per hour at 600 psig; design heat input not to exceed 300 MMBtu/hr. Fuel: Refinery fuel gas and natural gas. Permit: 63-08E

Flexible Group IDs: FG-BOILERS-S1, FGDHOUPANNUAL-S1

POLLUTION CONTROL EQUIPMENT

Low NOx Burner, Flue Gas Recirculation system

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	0.20 pounds per million BTUs heat input[2]	Based upon a 24-hour calendar day average	EU27-B&WBOILER1-S1	SC VI.1	**R 336.2802, 40 CFR 52.21, 40 CFR Part 60, Subpart Db**
2. NOx	0.07 pounds per million BTUs heat input[2]	Based upon an annual rolling average, as determined at the end of each calendar month	EU27-B&WBOILER1-S1	SC VI.1	**R 336.1201(3)**
3. CO	0.04 pounds per million BTUs heat input[2]	Based upon an annual rolling average, as determined at the end of each calendar month	EU27-B&WBOILER1-S1	SC VI.2	**R 336.1201(3)**
4. PM10	0.0076 pounds per million BTUs heat input[2]	Based upon a three- hour average	EU27-B&WBOILER1-S1	SC V.1	**R 336.1205**
5. PM	0.0019 pounds per million BTUs heat input[2]	Based upon a three-hour average	EU27-B&WBOILER1-S1	SC V.1	**R 336.1205**
6. VOC	0.0055 pounds per million BTUs heat input[2]	Based upon a three-hour rolling average	EU27-B&WBOILER1-S1	SC V.2	**R 336.1205, R 336.1702(a)**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural Gas or Refinery Fuel Gas	300,000 cubic feet per hour based on 1000 BTU/cubic Foot[2]	Hourly	EU27-B&WBOILER1-S1	SC VI.5	**R 336.1801, 40 CFR Part 60, Subpart Db**
2. H2S Content in Refinery Fuel Gas	160 ppmv[2]*	Three hour rolling average	EU27-B&WBOILER1-S1	SC VI.3	**40 CFR 60.102a(g)(1)(i)**
3. H2S Content in Refinery Fuel Gas	60 ppmv	365 successive calendar day rolling average basis	EU27-B&WBOILER1-S1	SC VI.3	**40 CFR 60.102a(g)(1)(ii)**

*Compliance with this limit shall be considered compliance with the limits of R 336.1406(1) which have been subsumed under this streamlined requirement.

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only burn sweet natural gas or refinery fuel gas as fuel in EU27-B&WBOILER1-S1.[2] **(R 336.1201(3), R 336.2802, 40 CFR Part 60, Subpart Db, 40 CFR 52.21)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The heat input for EU27-B&WBOILER1-S1 shall not exceed 300 million BTUs per hour.[2] **(R 336.1205, R 336.1220, R 336.1801, 40 CFR 52.21, 40 CFR Part 60, Subpart Db)**

2. The permittee shall not operate EU27-B&WBOILER1-S1 unless the low NOx burners are installed and operating properly.[2] **(R 336.1205, R 336.1910, 40 CFR 52.21(c-d), 40 CFR Part 60)**

3. The permittee shall not operate EU27-B&WBOILER1-S1 at firing rates of 50 to 300 MMBtu/hr heat input unless the Flue Gas Recirculation system is installed, maintained, and operated in a satisfactory manner.[2] **(R 336.1205, R 336.1224, R 336.1225, R 336.1901, R 336.2802, 40 CFR 52.21, 40 CFR Part 60)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Once during the five year term of this permit and every five years thereafter, the permittee shall verify emission rates from EU27-B&WBOILER1-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. For verification of PM10 emissions, testing shall include both the filterable and condensable fractions.[2] **(R 336.2001, R 336.2003, R 336.2004)**

   PM10[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**
   PM[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**
   Sulfuric acid mist[3] **(R 336.1201(3))**

2. Annually, the permittee shall verify emission rates from EU27-B&WBOILER1-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[3] **(R 336.2001, R 336.2003, R 336.2004)**
   PM[3] **(R 336.1201(3))**
   VOC[3] **(R 336.1201(3))**

3. For an emission test for a specific pollutant required every three years and every five years, the requirement to conduct an emission test every five years for that pollutant does not apply; emission testing for that pollutant is required every three years.[2] **(R 336.1201(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NO_X and oxygen emissions from EU27-B&WBOILER1-S1 on a continuous basis. The permittee shall install and operate the CEMS in accordance with the requirements of 40 CFR 60.11, 40 CFR 60.13, and 40 CFR Part 60, Appendix A, the applicable performance specification test of 40 CFR Part 60, Appendices B and F; With respect to 40 CFR Part 60 Appendix F, in lieu of the requirements of 40 CFR Part 60 Appendix F(5.1.1, 5.1.3, and 5.1.4), the permittee shall conduct either a Relative Accuracy Audit (RAA) or a Relative Accuracy Test Audit (RATA) once every twelve (12) calendar quarters, provided that a Cylinder Gas Audit is conducted each calendar quarter. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, 40 CFR Part 60, Subpart Db)**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the CO and oxygen emissions from EU27-B&WBOILER1-S1 on a continuous basis. The permittee shall install and operate the CEMS in accordance with the requirements of 40 CFR 60.11, 40 CFR 60.13, and 40 CFR Part 60, Appendix A, the applicable performance specification test of 40 CFR Part 60, Appendices B and F; With respect to 40 CFR Part 60 Appendix F, in lieu of the requirements of 40 CFR Part 60 Appendix F(5.1.1, 5.1.3, and 5.1.4), the permittee shall conduct either a Relative Accuracy Audit (RAA) or a Relative Accuracy Test Audit (RATA) once every twelve (12) calendar quarters, provided that a Cylinder Gas Audit is conducted each calendar quarter. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

3. The permittee monitor and keep records of the concentration of hydrogen sulfide (H2S) in the refinery fuel gas burned EU27-B&WBOILER-S1 in accordance with the Federal Standards of Performance as specified in 40 CFR Part 60, Subpart Ja, in a manner and with instrumentation acceptable to the Air Quality Division.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, 40 CFR Part 60, Subparts Ja)**

4. The permittee shall monitor and keep records of the concentration of total reduced sulfur (TRS) in the refinery fuel gas burned in EU27-B&WBOILER-S1, in a manner and with instrumentation acceptable to the Air Quality Division. The TRS monitor may be used as an alternative to the H2S monitoring required by SC VI.3.[3] **(R 336.1201(3))**

5. The permittee shall keep records of hourly fuel consumption rates, refinery fuel gas value, and calculations of the Btu/hr heat input rates to EU27-B&WBOILER1-S1 and make them available to the Department upon request.[2] **(R 336.1205, 40 CFR Part 60, Subpart Db)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-B&WBOILER1	63[1]	150[1]	**R 336.1225**

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and DDDDD. **(40 CFR Part 63, Subparts A and DDDDD)**

2. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A, Db, and Ja, as they apply to EU27-B&WBOILER-S1.[2] **(40 CFR Part 60, Subparts A, Db, and Ja)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).
[3] This condition is included at the request of the permittee.

EU-TEMP_BOILER-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Temporary portable boiler to provide steam when one or more existing boilers are off-line for scheduled maintenance or at other times to support the existing boilers. The boiler may be removed from the site when not in use and brought back on-site when needed. Fuel: Natural gas. Maximum heat input capacity no greater than 97.48 MMBtu/hr. Permit: 18-12B

Flexible Group IDs: FG-BOILERS-S1

POLLUTION CONTROL EQUIPMENT

Low-NOx burners

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall burn only natural gas in EU-TEMP_BOILER-S1. **(R 336.1201(3), R 336.1205, R 336.1224, R 336.1225, 40 CFR 52.21(c-d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU-TEMP_BOILER-S1 unless the low-NOx burner is installed, maintained, and operated in a satisfactory manner. **(R 336.1201(3), R 336.1205, R 336.1224, R 336.1225, R 336.1910, 40 CFR 52.21(c-d))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall provide written notification of when the boiler is placed or removed from the site to demonstrate the temporary status of EU-TEMP_BOILER-S1. The permittee shall submit this notification to the AQD District Supervisor within 15 days of placement or removal. **(40 CFR Part 60, Subpart Dc, 40 CFR Part 63, Subpart DDDDD)**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-TEMP_BOILER (unobstructed vertical discharge not required)	45[1]	20.58[1]	**R 336.1225**

IX. OTHER REQUIREMENT(S)

1. If EU-TEMP_BOILER-S1 remains on-site for more than 180 consecutive days, the permittee shall comply with the applicable provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Dc, as they apply to EU-TEMP_BOILER-S1. **(40 CFR Part 60, Subparts A and Dc)**

2. If EU-TEMP_BOILER-S1 remains on-site for more than 12 consecutive months, the permittee shall comply with the applicable provisions of the federal National Emissions Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and DDDDD, as they apply to EU-TEMP_BOILER-S1. **(40 CFR Part 63, Subpart DDDDD)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU29-WASTEWATER-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Crude Wastewater Treatment. Area 29. This emission group includes all equipment (mixers, pumps, tanks, valves, vessels, desalter wastewater treatment train, etc.) associated with this area, including EUTANK29T79-S1. EU-WASTEWATER excludes the two IGF Units. Permit: C-5460

Flexible Group ID: FGPROCUNITS-S1, FGDHOUPANNUAL-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any existing organic compound-water separator at a refinery unless all separator compartments and all forebays are equipped with a solid cover with all openings sealed and totally enclosing the liquid contents or unless an equivalent method is approved by the Air Quality Division.[2] **(R 336.1617(1))**

2. All openings in covers, separators, and forebays of any organic compound-water separator subject to the provisions of R 336.1617(1) shall be equipped with lids or seals such that the lids or seals are in the closed position at all times, except when in actual use.[2] **(R 336.1617(2))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8- S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and QQQ, as they apply to EU29-WASTEWATER-S1.[2] **(40 CFR Part 60, Subparts A and QQQ)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU38-BARGELOAD-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Barge loading operation for asphalt cement. Part of EU38-ROUGETERMNL-S1.

Flexible Group ID: FGASPHALTLOADING-S1/S2

POLLUTION CONTROL EQUIPMENT

Hydrogen sulfide scavenger additive used.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	3.2 tpy[2]	Rolling 12-month time period as determined at the end of each calendar month	EU38-BARGELOAD-S1	SC VI.2, SC VI.3	**R 336.1702(a)**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Asphalt cement loaded	168,000,000 gpy[2]	Rolling 12-month time period as determined at the end of each calendar month	EU38-BARGELOAD-S1	SC VI.3	**R 336.1225, R 336.1702(a)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU38-BARGELOAD-S1 unless the hydrogen sulfide scavenger is applied in quantities and at a frequency to ensure that the average hydrogen sulfide concentration in the hatchways during transfer to each barge does not exceed 400 ppmv.[1] **(R 336.1225)**

2. The permittee shall not operate EU38-BARGELOAD-S1 unless the approved protocol for demonstrating compliance with SC III.1, or an alternate protocol approved by the AQD District Supervisor, is implemented and maintained (the first approved protocol was submitted on February 27, 2012 and an approved revision was submitted on October 10, 2012). If the AQD does not otherwise notify the permittee within 60 days after submittal, the protocol shall be considered approved.[1] **(R 336.1225)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1225, R 336.1702(a))**

2. The permittee shall calculate the VOC emission rate from EU38-BARGELOAD-S1 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[2] **(R 336.1702(a))**

3. The permittee shall record the amount of asphalt cement loaded for EU38-BARGELOAD-S1 monthly, for the preceding 12-month rolling time period, in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[2] **(R 336.1225, R 336.1702(a))**

4. The permittee shall keep, in a satisfactory manner, a record of the amount of material transferred to each barge at EU38-BARGELOAD-S1. The permittee shall keep the record on file at the facility and make it available to the Department upon request.[1] **(R 336.1225, R 336.1901)**

5. The permittee shall monitor, in a satisfactory manner, either the hydrogen sulfide concentration in the hatchways during transfer for EU38-BARGELOAD-S1, or other parameters specified in the protocol required by SC III.2.[1] **(R 336.1225)**

6. The permittee shall keep records of the data required to be monitored by SC VI.5, the amount of hydrogen sulfide scavenger added to EU38-BARGELOAD-S1, and the date and time of each addition. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[1] **(R 336.1225)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EU70-COKER-S1
EMISSION UNIT CONDITIONS

DESCRIPTION:

The Coker converts Vacuum Resid (Crude Vacuum Tower Bottoms), a product normally sold as asphalt or blended into residual fuel oil, into lighter, more valuable products. The Vacuum Resid feedstock is heated before it enters the main fractionator, where lighter material vaporizes. The fractionator bottoms are routed through a fired heater and then into a coke drum. This emission unit consists of process vessels (fractionators), coke drums, heater, cooling tower, compressors, pumps, piping, drains, and various components (pumps and compressor seals, process valves, pressure relief valves, flanges, connectors, etc.). This emission group includes the Coke Handling System, which will collect, size, and transport the petroleum coke created during the coking process. This system consists of a coke pit, storage pad, enclosed crusher, enclosed conveyors, and surge bins. Other EU's were created to address individual pieces of equipment within this unit that have specific applicable requirements. Permit: 63-08E

Flexible Group IDs: FGPROCUNITS-S1, FGDHOUPANNUAL-S1

POLLUTION CONTROL EQUIPMENT:

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible emissions	No visible emissions[2]	Based upon a six minute average	Truck loading; weigh bins; and the coke handling system beginning with the enclosed conveyor leading to the crusher.	SC VI.2	**R 336.1301**
2. VOC	20 tpy[2]	12 month rolling time period*	Exhaust from coke drum steam vent.	SC V.1 SC VI.7	**R 336.1702**
3. PM	1.0 tpy[2]	12 month rolling time period*	Exhaust from coke drum steam vent.	SC V.1 SC VI.7	**R 336.1205, R 336.2802, 40 CFR 52.21**
4. H2S	0.7 tpy[2]	12 month rolling time period*	Exhaust from coke drum steam vent.	SC V.1 SC VI.7	**R 336.1224, R 336.1226(d)**

*Based upon a 12-month rolling time period as determined at the end of each calendar month

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Coke production	500 tons per hour[2]	Daily average	Equipment subject to SC I.1	SC VI.4	**R 336.1205, R 336.2802, 40 CFR 52.21**

2. The permittee shall not recycle coker blowdown water as quench water in the coke drums.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not vent the active coke drum to the atmosphere until the end of the coking cycle, when the drum pressure is 2 psig or less.[2] **(R 336.1205, R 336.1702, R 336.2802, 40 CFR 52.21, 40 CFR Part 60, Subparts A and Ja)**

2. The permittee shall not remove coke from a coke drum or handle coke after removal from a coke drum unless a program for continuous fugitive emissions control has been submitted to the AQD District Supervisor as a proposed revision to the Fugitive Dust Control Program required in Table B-1 of ROP No. 199700013c. The proposed revision shall address the following aspects of the coke handling system: all plant roadways, the plant yard, all material storage piles, and all material handling operations. The submitted program shall include, as a minimum, all of the following:
   a. Use of jet water sprays to empty the coke drum into a coke pit below the grade of the coke storage pad.
   b. Use of water sprays on any coke stockpile and during coke crushing to maintain coke moisture.
   c. Monitoring and correction of coke moisture to comply with SC I.1.
   d. Use of bridge cranes to transfer coke from the pit to a stockpile and from a stockpile to the crusher receiving hopper, except as allowed in SC III.2.e.
   e. Limited use of front-end loaders or other vehicles on the coke storage pad: only during bridge crane maintenance or breakdown.
   f. Inspection, maintenance, and monitoring of a "totally enclosed gallery" for transporting crushed coke from the crusher to the surge/weigh bin system.

   The permittee shall comply with the submitted program until the AQD District Supervisor approves the program or approves an amended program. Thereafter, the permittee shall comply with the approved program. At any time, the permittee may submit a modified program to the AQD District Supervisor for review and approval.[2] **(R 336.1371, R 336.1372, Act 451 324.5524)**

3. The height of any coke pile on the storage pad shall not exceed the height of the perimeter wall at any time.[2] **(R 336.1301)**

4. The permittee shall not operate any equipment in the coke handling system unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the coke handling system, has been submitted no less than 120 days before commencing operation of the coke handling system, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.[2] **(R 336.1205, R 336.1301, R 336.1331, R 336.1910, R 336.1911, R 336.2802, 40 CFR 52.21)**

   As a minimum, the MAP shall address the following:
   a. Maintaining required coke moisture content.
   b. Maintaining the integrity of all enclosures: integral crusher enclosure, conveyor enclosures and the shed for truck loading.
   c. Surge bin dust collector.

5. The permittee shall not cycle the coke drums more than 487 times per 12-month rolling time period, as determined at the end of each calendar month.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

6. The permittee shall keep the coke adequately wetted to ensure that the opacity limit in SC I.1 is met.[2] **(R 336.1205, R 336.2802, R 336.1301, 40 CFR 52.21)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the coker with a gas recovery system to recover the coke drum vapors and route them to the fuel gas treatment system.[2] **(R 336.1205, R 336.1702)**

2. The permittee shall equip and maintain the coker with instrumentation to monitor the pressure in the coke drum during coking cycles.[2] **(R 336.1205, R 336.1702, 40 CFR Part 60, Subparts A and Ja)**

3. The permittee shall equip and maintain the coke storage area with a pit below the grade of the coke storage pad and with perimeter walls no less than 30 feet above the level of the coke storage pad.[2] **(R 336.1301)**

4. The permittee shall not convey crushed coke to the surge bins unless the totally enclosed conveyors and surge bin dust collector are installed, maintained, and operated in a satisfactory manner.[2] **(R 336.1910)**

5. The permittee shall not load trucks with crushed coke unless the surge bin dust collector is installed, maintained, and operated in a satisfactory manner.[2] **(R 336.1910)**

6. The permittee shall not operate the Coker wet gas compressor (70C1) unless the compressor seal vent is routed to EU-COKERFLARE-S1.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Within 180 days after commencement of trial operation of EU70-COKER-S1, and annually thereafter, the permittee shall determine VOC, PM, and H_2S emission rates from the coke drum steam vent by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Determination of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. At any time after completing five tests acceptable to the AQD District Supervisor, the permittee may request that the testing frequency be reduced. If the testing frequency is reduced, testing shall be conducted no less often than once every five years. Test results shall be used to calculate emissions as required by SC VI.7, and to determine compliance with the requirements for FGDHOUPANNUAL-S1.[2] **(R 336.1205, R 336.1224, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2802, 40 CFR 52.21)**

2. For tests required by SC V.1, the following applies for valid, regularly scheduled tests, conducted during normal operations:[3] **(R 336.1201(3))**
   a. If a test indicates non-compliance with a permitted emission rate, and the test is required to be conducted on either a three or five year cycle, the frequency of such tests shall be annual for two consecutive years. Following two consecutive years of compliance, the frequency of testing shall return to the original three or five year cycle.

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep, in a satisfactory manner, a record of the coke drum pressure at which the active drum is vented to the atmosphere.[2] **(R 336.1205, R 336.1702, 40 CFR Part 60, Subparts A and Ja))**

2. The permittee shall verify the absence of visible emissions by taking six-minute visible emission readings for the equipment listed in SC I.1 a minimum of once per calendar day. The reader shall take each visible emission reading during routine operating conditions. For purposes of this condition, the opacity reading is not required to use Method 9. If the permittee observes any visible emissions, the permittee shall immediately initiate corrective actions.[2] **(R 336.1301)**

3. The permittee shall monitor, in a satisfactory manner, the moisture of the coke on the coke storage pad and other non-enclosed areas three times per week, as provided in the approved fugitive dust control program for EU70-COKER-S1.[2] **(R 336.1205, Act 451 324.5524)**

4. The permittee shall keep, in a satisfactory manner, a daily record of the amount of coke loaded onto trucks for shipping.[2] **(R 336.1205)**

5. The permittee shall keep, in a satisfactory manner, records of coke moisture, as required by SC VI.3.[2] **(R 336.1205, Act 451 324.5524)**

6. The permittee shall keep, in a satisfactory manner, records of all visible emission readings required by SC VI.2. At a minimum, records shall include the date, time, name of observer/reader, and status of visible emissions.[2] **(R 336.1301)**

7. The permittee shall calculate the VOC, PM, and H_2S emission rates from the coke drum steam vent monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. As soon as test results acceptable to the AQD District Supervisor are available from the testing required by SC V.1, the permittee shall use emission factors derived from testing to calculate emission rates.[2] **(R 336.1205, R 336.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**

8. The permittee shall keep, in a satisfactory manner, records of the number of times the coke drums are cycled for each month and for each 12-month rolling time period as determined at the end of each calendar month.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. Coke Drum Vent (unobstructed vertical discharge not required)	not restricted	222[2]	R 336.1225, R 336.1226(d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).
[3]This condition is included at the request of the permittee.

EU-COKERFLARE-S1
EMISSION UNIT CONDITIONS

DESCRIPTION:

Coker Plant Flare. Area 76. Permit: 63-08E

Flexible Group IDs: FGFLARES-S1, FGDHOUPANNUAL-S1

POLLUTION CONTROL EQUIPMENT:

NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall install a coker blowdown gas recovery system upstream of EU-COKERFLARE-S1 to recover and route coke drum vent gas to the fuel gas treatment system.[2] **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**

2. The permittee shall equip and maintain the coker blowdown gas recovery system with redundant recovery compressors, each designed with the capacity to individually recover all coke drum vent gases.[2] **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**

3. The permittee shall keep a demonstration showing that the coker blowdown gas recovery system is sized appropriately for the coke drums. The demonstration shall include the following elements[2]: **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**
   a. The design capacity of the coker blowdown gas recovery system and design specifications of components, such as the compressors.
   b. Description of extra capacity and redundancies designed into the coker blowdown gas recovery system.
   c. An explanation of the assumptions made in determining the appropriate design capacity of the coker blowdown gas recovery system.
   d. Confirmation that no cross-over points exist between the coker blowdown gas recovery system and any fuel gas systems outside of it.

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install additional flare gas recovery capacity upstream of EU-COKERFLARE-S1 to recover and route flare gas to the fuel gas treatment system. The installation shall be completed by December 31, 2018.[3] **(R 336.1201(3))**~~NA~~

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall install, maintain, and continuously operate a continuous flow measuring device to continuously monitor and record the flow of gas to the flare. The flow measuring device shall be sensitive to rapid flow changes, and have the capability of reporting both instantaneous velocity and totalized flow. Materials exposed to the flare gas shall be corrosion resistant. The flow measuring device shall (i) feature automated daily calibrations at low and high ranges, and (ii) shall signal alarms if the calibration error or drift is exceeded, provided that the monitor is equipped with such capability. The volumetric flow measuring device may consist of one or more flow meters, and, as combined, shall meet the following specifications.[2] **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**
   a. Velocity Range: 0.1-250 ft/sec.
   b. Repeatability: ± 1% of reading over the velocity range.
   c. Accuracy: ± 20% of reading over the velocity range of 0.1-1 ft/s and ± 5% of reading over the velocity range of 1-250 ft/s.
   d. Installation: Applicable AGA, ANSI, API, or equivalent standard.
   e. Flow Rate Determination: Must be corrected to one atmosphere pressure and 68 °F and recorded as one-minute averages.
   f. Data Records: Measured continuously and recorded over one minute averages. The instrument shall be capable of storing or transferring all data for later retrieval.
   g. QA/QC: An annual verification of accuracy is required, and shall be specified by the manufacturer.

2. All data as generated by the flow measuring device shall be continuously recorded. The recording system must have the capability to generate one-minute average data from that which is continuously generated by the flow measuring device. **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**

3. The permittee shall maintain the flow measuring device in good operating condition at all times when the flare that it serves is operational, except when out of service due to[2]: **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**
   a. Breakdowns and unplanned system maintenance, which shall not exceed 96 hours, cumulatively, per quarter for each reporting period; or,
   b. Planned maintenance, which shall not exceed 14 days per 18 month period, provided that a written notification detailing the reason for maintenance and methods that will be used during the maintenance period to determine emissions associated with flare events is provided to the AQD District Supervisor prior to, or within 24 hours of, removal of the monitoring system from service.

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The Permittee shall keep on file drawings identifying the location of the flow measuring device required by SC VI.1.[2] **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).
[3]This condition is included at the request of the permittee.

EU42-43SULRECOV-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Three Claus Sulfur Recovery Trains and two SCOT Tailgas Treating Units (subject to 40 CFR Part 60, Subpart Ja). Permit 63-08E

Flexible Group IDs: FGPROCUNITS-S1, FGDHOUPANNUAL-S1, FGTIER3-S1, FGTIER3SO2-S1

POLLUTION CONTROL EQUIPMENT

Thermal Oxidizer (Incinerator)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. SO_2 emissions from the thermal oxidizer that controls the tail gas treatment units, No. 1 and No. 2	250 ppm by volume[2]	Based upon a 12 hour average at zero % oxygen on a dry basis	EU42-43-SULRECOV-S1*	SC VI.1	**40 CFR 60.102a(f)(1)(i)**
2. SO_2 emissions from the thermal oxidizer that controls the tail gas treatment units, No. 1 and No. 2	175 ppm by volume[3]	At zero % oxygen on a dry basis on an annual rolling average, as determined at the end of each calendar month	EU42-43-SULRECOV-S1	SC VI.1	**R 336.1201(3)**
3. NOx emission rate from the thermal oxidizer	7.5 lb/hr[2]	Three hour average	EU42-43SULRECOV-S1	SC V.1	**R 336.1205, R 336.2802, 40 CFR 52.21**
4. Carbon Monoxide emission rate from the thermal oxidizer	0.04 lb/MMBTU[2]	Three hour average	EU42-43SULRECOV-S1	SC V.2	**R 336.2802, 40 CFR 52.21**
5. Particulate Matter emission rate from the thermal oxidizer	1.75 lb/hr[2]	Three hour average	EU42-43SULRECOV-S1	SC V.4	**R 336.1205, R 336.2802, 40 CFR 52.21**
6. PM10 emission rate from the thermal oxidizer	1.75 lb/hr[2]	Three hour average	EU42-43SULRECOV-S1	SC V.3	**R 336.2802, 40 CFR 52.21**
7. Volatile Organic Compound emission rate from the thermal oxidizer	0.0055 lb/MMBTU[2]	Three hour average	EU42-43SULRECOV-S1	SC V.5	**R 336.1205, R 336.1702(a), R 336.2802, 40 CFR 52.21**

*Sulfur recovery plant affected equipment includes the pits used to store recovered sulfur, but does not include secondary sulfur storage vessels or loading facilities downstream of the sulfur pits. (40 CFR 60.101a)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Elemental sulfur produced	145 long tons per day[2]	Monthly average	EU42-43SULRECOV-S1	SC VI.2	**R 336.1201(3)**
2. Elemental sulfur produced	130 long tons per day[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU42-43SULRECOV-S1	SC VI.3	**R 336.1201(3)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall manage all EU42-43SULRECOV-S1 sulfur pit emissions so that sulfur pit emissions to the atmosphere are eliminated or included and monitored as part of the applicable EU42-43SULRECOV-S1 tail gas emission limits. Periods of maintenance of the sulfur pit, during which the emission limits do not apply, shall not exceed 240 hours per year. The permittee shall document the time periods during which the sulfur pit vents were not controlled and measures taken to minimize emissions during these periods. Examples of these measures include not adding fresh sulfur or shutting off vent fans or eductors. **(40 CFR 60.102a(f)(1) and (3))**

2. The maximum heat input in the thermal oxidizer of EU42-43SULRECOV-S1 shall not exceed a maximum of 25 million BTUs per hour, on a daily average.[2] **(R 336.1205, R 336.1702, R 336.2802, 40 CFR 52.21)**

3. The natural gas usage in the thermal oxidizer of EU42-43SULRECOV-S1 shall not exceed a maximum of 25,000 cubic feet per hour, on a daily average, based on 1,000 BTU/scf.[2] **(R 336.1225, 40 CFR 52.21)**

4. The permittee shall not operate the sulfur recovery units A, B, and C and the tail gas treatment units No. 1 and No. 2 in EU42-43SULRECOV-S1 unless the thermal oxidizer is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the thermal oxidizer includes operating the thermal oxidizer as described in the startup, shutdown, and malfunction plan required by 40 CFR Part 63, Subparts A and UUU.[2] **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21, 40 CFR Part 60, Subparts A and Ja)**

5. The permittee shall not operate the sulfur recovery units A, B, and C and the tail gas treatment units No. 1 and No. 2 in EU42-43SULRECOV-S1 unless a minimum temperature of 1200 °F on an hourly average and minimum retention time of 1.0 second in the thermal oxidizer is maintained.[2] **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21)**

6. The permittee shall not operate the sulfur recovery units A, B, and C and the tail gas treatment units No. 1 and No. 2, unless provisions of the Federal Standards of Performance for New Source Stationary Sources, 40 CFR Part 60, Subparts A **and** Ja-Standards of Performance for Petroleum Refineries, are met.[2] **(40 CFR Part 60, Subparts A and Ja)**

7. The permittee shall not operate EU42-43SULRECOV-S1 unless an approved Startup, Shutdown and Malfunction Plan (SSMP), or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. The plan shall include procedures for maintaining and operating in a satisfactory manner, EU42-43SULRECOV-S1, add-on air pollution control device, or monitoring equipment during malfunction events, and a program for corrective action for such events. If the SSMP fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the malfunction abatement plan within 45 days after such an event occurs.[2] **(40 CFR Part 63, Subparts A and UUU)**

8. The permittee shall not operate EU42-43SULRECOV-S1 unless an approved Operation, Maintenance and Monitoring Plan (OMMP), or an alternate plan approved by the AQD District Supervisor, is implemented and maintained.[2] **(40 CFR 63.1564(a)(3))**

9. The permittee shall maintain a summary of a plan, implemented for enhanced maintenance and operation of its EU42-43SULRECOV-S1, including the TGTUs, any supplemental control devices, and the appropriate upstream process units ("Sulfur Shedding Plan"). The Sulfur Shedding Plan shall be a compilation of the permittee's approaches for exercising good air pollution control practices for minimizing SO_2 emissions. The Sulfur Shedding Plan shall provide for continuous operation of the EU42-43SULRECOV-S1 between scheduled maintenance turnarounds with minimization of emissions from each EU42-43SULRECOV-S1. The Sulfur Shedding 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, TGTUs, and any supplemental control device to coincide with scheduled turnarounds of major upstream process units. The Sulfur Shedding Plan shall have as a goal the elimination of acid gas flaring. The permittee shall comply with the Sulfur Shedding Plan at all times, including periods of startup, shut down, and malfunction of the EU42-43SULRECOV-S1.[3] **(40 CFR 60.11(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the EU42-43SULRECOV-S1 sulfur pit with a properly operating system to capture and remove vapors from the sulfur pit. Installation shall be completed prior to startup of EU08-GOHTCHARHTR2-S1 or the new reactor in EU08-GOHT-S1, whichever occurs first. Gases captured and removed from the sulfur pit shall be returned to the inlet of EU42-43SULRECOV-S1 or routed to the thermal oxidizer.[3] **(R 336.1201(3))**~~NA~~

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Once during the five year term of this permit and every five years thereafter, the permittee shall verify NO_X emission rates from EU42-43SULRECOV-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205, R 336.2001, R 336.2003, R 336.2004, R 336.2802, 40 CFR 52.21)**

2. Once during the five year term of this permit and every five years thereafter, the permittee shall verify CO emission rates from EU42-43SULRECOV-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.2001, R 336.2003, R 336.2004, R 336.2802, 40 CFR 52.21)**

3. Once during the five year term of this permit and every five years thereafter, the permittee shall verify PM10 emission rates from EU42-43SULRECOV-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. For verification of PM10 emissions, testing shall include both the filterable and condensable fractions.[2] **(R 336.2001, R 336.2003, R 336.2004, R 336.2802, 40 CFR 52.21)**

4. Once during the five year term of this permit and every five years thereafter, the permittee shall verify PM emission rates from EU42-43SULRECOV-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205, R 336.2001, R 336.2003, R 336.2004, R 336.2802, 40 CFR 52.21)**

5. Once during the five year term of this permit and every five years thereafter, the permittee shall verify VOC emission rates from EU42-43SULRECOV-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD.

The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2802, 40 CFR 52.21)**

6. Within every three years of the most current stack test, and every three years thereafter, the permittee shall verify sulfuric acid mist emission rates from EU42-43SULRECOV-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[3] **(R 336.1201(3))**

7. For tests required by SC V.1 through SC V.6, the following applies for valid, regularly scheduled tests, conducted during normal operations:[3] **(R 336.1201(3))**
   a. If a test indicates non-compliance with a permitted emission rate, and the test is required to be conducted on either a three or five year cycle, the frequency of such tests shall be annual for two consecutive years. Following two consecutive years of compliance, the frequency of testing shall return to the original three or five year cycle.

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Monitoring and recording of sulfur dioxide concentration, oxygen concentration, and operating information is required to comply with the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR, Part 60, Subparts A and Ja. All source emissions data and operating data shall be submitted to the Division in an acceptable format within 30 days following the end of the quarter in which data were collected.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, 40 CFR 60.106a(a)(1))**

2. The permittee shall keep daily records of the long tons of elemental sulfur produced in EU42-43SULRECOV-S1.[2] **(R 336.1201(3))**

3. The permittee shall keep records of the long tons of elemental sulfur produced per day, on a 12-month rolling average, in EU42-43SULRECOV-S1.[2] **(R 336.1201(3))**

4. The permittee shall monitor and record the temperature from the thermal oxidizer on a continuous basis with instrumentation acceptable to AQD.[2] **(R336.1201(3)**

5. The permittee shall monitor the amount of natural gas used in the thermal oxidizer on a daily average basis.[1] **(R 336.1225)**

6. The permittee shall keep records of emissions and operating information to comply with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Ja. The permittee shall keep all source emissions data and operating information on file at the facility for a period of at least five years and make them available to the Department upon request.[2] **(40 CFR Part 60, Subparts A and Ja)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV43-H2	42.5[1]	199.5[1]	**R 336.1225, R 336.1226(d)**

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provision of the federal Standards of Performance of New Stationary Sources as specified in 40 CFR Part 60, Subparts A, and Ja, as they apply to EU42-43SULRECOV-S1.[2] **(40 CFR Part 60, Subparts A and Ja)**

2. The permittee comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and Subpart UUU, as they apply to EU42-43SULRECOV-S1.[2] **(40 CFR Part 63, Subparts A and UUU)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).
[3] This condition is included at the request of the permittee.

EU72-SULRBLOCK2-S1
EMISSION UNIT CONDITIONS

DESCRIPTION:

Sulfur Block 2. Area 72. The Sulfur Block removes hydrogen sulfide from acid gas and converts it to elemental sulfur using Claus Process (Trains A and B), the SCOT Tail Gas Treating Unit process (Trains No. 1 and No. 2), and associated amine treating equipment. The exhaust tail gas is routed to a thermal oxidizer. This emission group consists of process vessels (including thermal reactors, an absorbing tower, and a stripping tower), heaters, tanks, containers, compressors, seals, process valves, flanges, connectors, etc.). Other EU's have been created to address individual units which have specific applicable requirements. Permit: 63-08E

Flexible Group IDs: FGPROCUNITS-S1, FGDHOUPANNUAL-S1, FGTIER3-S1, FGTIER3SO2-S1

POLLUTION CONTROL EQUIPMENT:

Thermal oxidizer

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO_X	0.2 lb/MMBTU[2]	Three hour average	EU72-SULRBLOCK2-S1	SC V.1	**R 336.1205, R 336.2802, 40 CFR 52.21**
2. SO_2	250 ppmv at 0% oxygen[2]	12-hour average, dry gas basis	EU72-SULRBLOCK2-S1*	SC VI.1	**40 CFR 60.102a(f)(1)(i)**
3. SO_2	100 ppmv at 0% oxygen[3]	Annual rolling average	EU72-SULRBLOCK2-S1	SC VI.1	**R 336.1201(3)**
4. CO	0.04 lb/MMBTU[2]	Three hour average	EU72-SULRBLOCK2-S1	SC V.2	**R 336.1205, R 336.2802, 40 CFR 52.21**
5. PM	2.85 lb/hr[2]	Three hour average	EU72-SULRBLOCK2-S1	SC V.4	**R 336.1205, R 336.2802, 40 CFR 52.21**
6. PM10	2.85 lb/hr[2]	Three hour average	EU72-SULRBLOCK2-S1	SC V.3	**R 336.1205, R 336.2802, 40 CFR 52.21**
7. VOC	0.0055 lb/MMBTU[2]	Three hour average	EU72-SULRBLOCK2-S1	SC V.5	**R 336.1205, R 336.1702(a), R 336.2802, 40 CFR 52.21**

* Sulfur Block plant affected equipment includes the pits used to store recovered sulfur, but does not include secondary sulfur storage vessels or loading facilities downstream of the sulfur pits. (40 CFR 60.101a)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Elemental sulfur produced	260 long tons per day[2]	12-month rolling average	EU72-SULRBLOCK2-S1	SC VI.8	**R 336.1205, R 336.2802, 40 CFR 52.21**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The heat input capacity of auxiliary fuel in the thermal oxidizer of EU72-SULRBLOCK2-S1 shall not exceed a maximum of 38 MM Btu per hour, on a daily average.[2] **(R 336.1205, R 336.1702, R 336.2802, 40 CFR 52.21)**

2. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Ja, as they apply to EU72-SULRBLOCK2-S1.[2] **(40 CFR Part 60, Subparts A and Ja)**

3. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and UUU, as they apply to EU72-SULRBLOCK2-S1.[2] **(40 CFR Part 63, Subparts A and UUU)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU72-SULRBLOCK2-S1 unless the thermal oxidizer is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the thermal oxidizer includes operating the thermal oxidizer as described in the startup, shutdown, and malfunction plan required by 40 CFR Part 63, Subparts A and UUU.[2] **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.2802, R 336.1901, R 336.1910, 40 CFR 52.21, 40 CFR 60.102a(f)(1)(i))**

2. The permittee shall equip and maintain the EU72-SULRBLOCK2-S1 sulfur pits with a properly operating degassing system to remove and capture H_2S and TRS from the sulfur in the sulfur pits prior to transfer to the sulfur storage tanks. Gases removed and captured by the degassing system shall be routed to the thermal oxidizer or returned to the inlet of EU72-SULRBLOCK2-S1.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Once during the five year term of this permit and every five years thereafter, the permittee shall verify NO_x emission rates from EU72-SULRBLOCK2-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21, 40 CFR Part 60, Subparts A and Ja)**

2. Once during the five year term of this permit and every five years thereafter, the permittee shall verify CO emission rates from EU72-SULRBLOCK2-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.2001, R 336.2003, R 336.2004, R 336.2802, 40 CFR 52.21)**

3. Once during the five year term of this permit and every five years thereafter, the permittee shall verify PM10 emission rates from EU72-SULRBLOCK2-S1 by testing at owner's expense, in accordance with Department

requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. For verification of PM10 emissions, testing shall include both the filterable and condensable fractions.[2] **(R 336.2001, R 336.2003, R 336.2004, R 336.2802, 40 CFR 52.21)**

4. Once during the five year term of this permit and every five years thereafter, the permittee shall verify PM emission rates from EU72-SULRBLOCK2-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205, R 336.2001, R 336.2003, R 336.2004)**

5. Once during the five year term of this permit and every five years thereafter, the permittee shall verify VOC emission rates from EU72-SULRBLOCK2-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2802, 40 CFR 52.21)**

6. Within every three years of the most current stack test, and every three years thereafter, the permittee shall verify sulfuric acid mist emission rates from EU72-SULRBLOCK2-S1 by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[3] **(R 336.1201(3))**

7. For tests required by SC V.1 through SC V.6, the following applies for valid, regularly scheduled tests, conducted during normal operations[3]: **(R 336.1201(3))**
   a. If a test indicates non-compliance with a permitted emission rate, and the test is required to be conducted on either a three or five year cycle, the frequency of such tests shall be annual for two consecutive years. Following two consecutive years of compliance, the frequency of testing shall return to the original three or five year cycle.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the SO_2 and oxygen emissions from EU72-SULRBLOCK2-S1 on a continuous basis. The permittee shall install and operate the Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix 3-S1 to this permit and shall use the CEMS data for determining compliance with SC I.2.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, 40 CFR Part 60, Subparts A and Ja)**

2. The permittee shall monitor the amount of natural gas used in the thermal oxidizer on a daily average basis.[2] **(R 336.1205, R 336.1702, R 336.2802, 40 CFR 52.21)**

3. On a daily basis, the permittee shall calculate the heat input of natural gas used in the thermal oxidizer and keep records of the fuel usage and heat input to the thermal oxidizer.[2] **(R 336.1205, R 336.1702, R 336.2802, 40 CFR 52.21)**

4. The permittee shall monitor emissions and operating information for EU72-SULRBLOCK2-S1 in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Ja.[2] **(R 336.1205, R 336.1225, R 336.1901, 40 CFR Part 60 Subparts A and Ja)**

5. The permittee shall monitor emissions and operating and maintenance information for EU72-SULRBLOCK2-S1 in accordance with the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63 Subparts A and UUU.[2] **(40 CFR Part 63, Subparts A and UUU)**

6. The permittee shall keep records of emissions and operating information to comply with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Ja. The permittee shall keep all source emissions data and operating information on file at the facility for a period of at least five years and make them available to the Department upon request.[2] **(R 336.1205, 40 CFR Part 60 Subparts A and Ja)**

7. The permittee shall keep records of emission information and operating and maintenance information to comply with the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and UUU. The permittee shall keep all source emissions and operating and maintenance information on file at the facility for a period of at least five years and make them available to the Department upon request.[2] **(40 CFR Part 63, Subparts A and UUU)**

8. The permittee shall keep records of the long tons of elemental sulfur produced per day, on a 12-month rolling average, in EU72-SULRBLOCK2-S1.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

9. The permittee shall keep records of the hours per month and 12-month rolling time period, as determined at the end of each calendar month, that the sulfur pit degassing system did not operate while EU72-SULRBLOCK2-S1 was operating.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV72-V22	96[1]	150[1]	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).
[3]This condition is included at the request of the permittee.

EU99-LPGLOADRACK-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

LPG Truck Loading Facility. Area 99. This LPG loading facility is located at the Marketing Terminal. The group includes all equipment (i.e.: piping, vessels, valves, pumps, and loading arms) associated with the LPG loading racks.

Flexible Group ID: FGPROCUNITS-S1, FGDHOUPANNUAL-S1

POLLUTION CONTROL EQUIPMENT

Flare

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	0.7 pounds/1000 gallons of organic compounds loaded	Instantaneous	EU99-LPGLOADRACK-S1	SC IV.1, SC IV.2	**R 336.1609(2)**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not allow the loading of any organic compound that has a true vapor pressure of more than 1.5 psia at actual conditions from any stationary vessel into any delivery vessel located at an existing loading facility and which has a throughput of 5,000,000 or more gallons of such compounds per year unless such delivery is controlled by a system that captures all displaced organic vapor and air by means of a vapor-tight collection line and recovers the organic vapor such that emissions to the atmosphere do not exceed 0.7 pounds of organic vapor per 1,000 gallons of organic compounds loaded. **(R 336.1609(2))**

2. The permittee shall ensure that the delivery vessel is equipped, maintained and controlled with all of the following:
   a. An interlocking system or procedure to ensure that the vapor-tight collection line is connected before any organic compound can be loaded. **(R 336.1609(3)(a))**
   b. A device to ensure that the vapor-tight collection line shall close upon disconnection so as to prevent the release of organic vapor. **(R 336.1609(3)(b))**
   c. A device to accomplish complete drainage before the loading device is disconnected or a device to prevent liquid drainage from the loading device when not in use. **(R 336.1609(3)(c))**
   d. Pressure-vacuum relief valves that are vapor-tight and set to prevent the emission of displaced organic vapor during the loading of the delivery vessel, except under emergency conditions. **(R 336.1609(3)(d))**
   e. Hatch openings that are kept closed and vapor-tight during the loading of the delivery vessel. **(R 336.1609(3)(e))**

3. The permittee shall develop written procedures for the operation of all such control measures. Such procedures shall be posted in accessible, conspicuous location near the loading service. **(R 336.1609(4))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUTANK87-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Tank 87, a pressure vessel for the storage of petroleum hydrocarbons with a true vapor pressure of more than 11 psia. Capacity = 451038 gallons

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not store any organic compound having a true vapor pressure of 11 or more psia at actual conditions in EUTANK87-S1 unless this tank is a pressure tank capable of maintaining working pressures sufficient to prevent organic vapor or gas loss to the atmosphere at all times, except under emergency conditions. **(R 336.1605(1)(a))**

2. All openings in EUTANK87-S1 shall be equipped with covers, lids or seals such that the covers, lids or seals are in a closed position at all times, except when in actual use. **(R 336.1605(2))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor and record the pressure of EUTANK87-S1, on a daily basis. **(R 336.1213(3), R 336.1901)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUTANK96-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Tank 96, a pressure vessel for the storage of petroleum hydrocarbons with a true vapor pressure of more than 11 psia. Capacity = 164,136 gallons.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not store any organic compound having a true vapor pressure of 11 or more psia at actual conditions in EUTANK96-S1 unless this tank is a pressure tank capable of maintaining working pressures sufficient to prevent organic vapor or gas loss to the atmosphere at all times, except under emergency conditions. **(R 336.1605(1)(a))**

2. All openings in EUTANK96-S1 shall be equipped with covers, lids or seals such that the covers, lids or seals are in a closed position at all times, except when in actual use. **(R 336.1605(2))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor and record the pressure of EUTANK96-S1, on a daily basis. **(R 336.1213(3), R 336.1901)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUTANK176-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Tank 176, a pressure vessel used for the storage of petroleum liquids with a true vapor pressure of more than 1.5 psia, but less than 11 psia. Capacity = 452,214 gallons

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not store any organic compound having a true vapor pressure of 11 or more psia at actual conditions in EUTANK176-S1 unless this tank is a pressure tank capable of maintaining working pressures sufficient to prevent organic vapor or gas loss to the atmosphere at all times, except under emergency conditions. **(R 336.1604(1)(a))**

2. All openings in EUTANK176-S1 shall be equipped with covers, lids or seals such that the covers, lids or seals are in a closed position at all times, except when in actual use. **(R 336.1604(2))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor and record the pressure of EUTANK176-S1, on a daily basis. **(R 336.1213(3), R336.1901)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUNSPSQQQ-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

All individual drains and sewer lines connected to the first downstream junction box, all oil-water separators and all aggregate facilities as defined in 40 CFR 60.691 (Subpart QQQ) for which construction, modification or reconstruction is commenced after May 4, 1987. The list of subject sewers and drains is maintained current by the refinery.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Water Seals and Plugs.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall use the test plans and procedures specified in Appendix 5-S1. **(R 336.1213(3)(b)(ii))**

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall use the procedures and methods specified in Appendices 3-S1 and 4-S1. **(R 336.1213(3)(b)(ii))**

See Appendices 3-S1 and 4-S1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NOTE: The permittee shall comply with the requirements of 40 CFR Part 60, Subpart A (General Provisions) and Subpart QQQ (standards of Performance for VOC Emissions from Refinery Wastewater Systems) for all equipment included in EU-NSPSQQQ. The applicable sections of Subpart QQQ include but are not necessarily limited to the following:

(40 CFR Part 60, Subparts A and QQQ)

A. 60.690 (Applicability and designation of affected facility)
B. 60.691 (Definitions)
C. 60.692-1(Standards: General)
D. 60.692-2 (Standards: Individual drain system)
E. 60.692-3 (Standards: Oil-water separators)
F. 60.692-4 (Standards: Aggregate facilities)
G. 60.692-5 (Standards: Closed vent Systems and Control devices)
H. 60.692-6 (Standards: Delay of repairs)
I. 60.692-7(Standards: Delay of compliance)
J. 60.693-1 (Alternative standards for individual drain systems)
K. 60.693-2 (Alternative standards for oil-water separators)
L. 60.694 (Permission to use alternative means of emission limitation)
M. 60.699 (Delegation of Authority)

Details of the above requirements are presented in the following conditions:

1. The permittee shall comply with the requirements of 40 CFR 60.692-1 to 40 CFR 60.692-5 and with 40 CFR 60.693-1 and 40 CFR 60.693-2, except during periods of startup, shutdown, or malfunction. **(40 CFR 60.692-1(a))**

2. Compliance with 40 CFR 60.692-1 to 40 CFR 60.692-5 and with 40 CFR 60.693-1 and 40 CFR 60.693-2 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 60.696. **(40 CFR 60.692-1(b))**

3. Permission to use alternative means of emission limitation to meet the requirements of 40 CFR 60.692-2 through 40 CFR 60.692-4 may be granted as provided in 40 CFR 60.694. **(40 CFR 60.692-1(c))**

4. Storm water sewer systems are not subject to the requirements of NSPS subpart QQQ. **(40 CFR 60.692-1(d)(1))**

5. Ancillary equipment, which is physically separate from the wastewater system and does not come in contact or store oily wastewater, is not subject to the requirements of NSPS Subpart QQQ. **(40 CFR 60.692-1(d)(2))**

6. Non-contact cooling water systems are not subject to the requirements of NSPS Subpart QQQ. **(40 CFR 60.692-1(d)(3))**

7. The permittee shall demonstrate compliance with the exclusions in paragraphs 40 CFR 60.692(d)(1), (2), and (3) as provided in 40 CFR 60.697 (h), (i), and (j). **(40 CFR 60.692-1(d)(4))**

8. The permittee shall equip each drain with water seal controls. **(40 CFR 60.692-2(a)(1))**

7. The permittee shall check each drain in active service by visual or physical inspection initially and monthly thereafter for indications of low water levels or other conditions that would reduce the effectiveness of the water seal controls. **(40 CFR 60.692-2(a)(2))**

10. Except as provided in paragraph 40 CFR 60.692-2(a)(4), permittee shall check each drain out of active service by visual or physical inspection initially and weekly thereafter for indications of low water levels or other problems that could result in VOC emissions. **(40 CFR 60.692-2(a)(3))**

11. As an alternative to the requirements in paragraph 40 CFR 60.692-2(a)(3), if the permittee elects to install a tightly sealed cap or plug over a drain that is out of service, inspections shall be conducted initially and semiannually to ensure caps or plugs are in place and properly installed. **(40 CFR 60.692-2(a)(4))**

12. Whenever low water levels or missing or improperly installed caps or plugs are identified, water shall be added or first efforts at repair shall be made as soon as practicable, but not later than 24 hours after detection, except as provided in 40 CFR 60.692-6. **(40 CFR 60.692-2(a)(5))**

13. The permittee shall equip junction boxes with a cover and may have an open vent pipe. The vent pipe shall be at least 90 cm (3 ft) in length and shall not exceed 10.2 cm (4 in) in diameter. **(40 CFR 60.692-2(b)(1))**

14. Junction box covers shall have a tight seal around the edge and shall be kept in place at all times, except during inspection and maintenance. **(40 CFR 60.692-2(b)(2))**

15. Junction boxes shall be visually inspected initially and semiannually thereafter to ensure that the cover is in place and to ensure that the cover has a tight seal around the edge. **(40 CFR 60.692-2(b)(3))**

16. If a broken seal or gap is identified, first effort at repair shall be made as soon as practicable, but not later than 15 calendar days after the broken seal or gap is identified, except as provided in 40 CFR 60.692-6. **(40 CFR 60.692-2(b)(4))**
    a. Sewer lines shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces. **(40 CFR 60.692-2(c)(1))**
    b. The portion of each unburied sewer line shall be visually inspected initially and semiannually thereafter for indication of cracks, gaps, or other problems that could result in VOC emissions. **(40 CFR 60.692-2(c)(2))**
    c. Whenever cracks, gaps, or other problems are detected, repairs shall be made as soon as practicable, but not later than 15 calendar days after identification, except as provided in 40 CFR 60.692-6. **(40 CFR 60.692-2(c)(3))**

17. Except as provided in 40 CFR 60.692-2(e), each modified or reconstructed individual drain system that has a catch basin in the existing configuration prior to May 4, 1987 shall be exempt from the provisions of 40 CFR 60.692-2. **(40 CFR 60.692-2(d)**

18. Refinery wastewater routed through new process drains and a new first common downstream junction box, either as part of a new individual drain system or an existing individual drain system, shall not be routed through a downstream catch basin. **(40 CFR 60.692-2(e))**

19. Each oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment subject to the requirements of 40 CFR Part 60, Subpart QQQ shall be equipped and operated with a fixed roof, which meets the following specifications, except as provided in paragraph 40 CFR 60.692(d) or in 40 CFR 60.693-2. **(40 CFR 60.692-3(a))**
    a. The fixed roof shall be installed to completely cover the separator tank, slop oil tank, storage vessel, or other auxiliary equipment with no separation between the roof and the wall. **(40 CFR 60.692-3(a)(1))**
    b. The vapor space under a fixed roof shall not be purged unless the vapor is directed to a control device. **(40 CFR 60.692-3(a)(2))**
    c. If the roof has access doors or openings, such doors or openings shall be gasketed, latched, and kept closed at all times during operation of the separator system, except during inspection and maintenance. **(40 CFR 60.692-3(a)(3))**
    d. Roof seals, access doors, and other openings shall be checked by visual inspection initially and semiannually thereafter to ensure that no cracks or gaps occur between the roof and wall and that access doors and other openings are closed and gasketed properly. **(40 CFR 60.692-3(a)(4))**
    e. When a broken seal or gasket or other problem is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after it is identified, except as provided in 40 CFR 60.692-6. **(40 CFR 60.692-3(a)(5))**

20. Each oil-water separator tank or auxiliary equipment with a design capacity to treat more than 16 liters per second (250 gpm) of refinery wastewater shall, in addition to the requirements in paragraph 40 CFR 60.692-3(a), be equipped and operated with a closed vent system and control device, which meet the requirements of 40 CFR 60.692-5, except as provided in paragraph 40 CFR 60.692-3(c) or in 40 CFR 60.693-2. **(40 CFR 60.692-3(b))**

21. Each modified or reconstructed oil-water separator tank with a maximum design capacity to treat less than 38 liters per second (600 gpm) of refinery wastewater which was equipped and operated with a fixed roof covering the entire separator tank or a portion of the separator tank prior to May 4, 1987 shall be exempt from the requirements of paragraph 40 CFR 60.692-3(b), but shall meet the requirements of paragraph 40 CFR 60.692-3(a), or may elect to comply with paragraph 40 CFR 60.692-3(c)(2). **(40 CFR 60.692-3(c)(1))**

22. The permittee may elect to comply with the requirements of paragraph 40 CFR 60.692-3(a) for the existing fixed roof covering a portion of the separator tank and comply with the requirements for floating roofs in Sec. 60.693-2 for the remainder of the separator tank. **(40 CFR 60.692-3(c)(2))**

23. Storage vessels, including slop oil tanks and other auxiliary tanks that are subject to the standards in 40 CFR 60.112, 60.112a,60.112b and associated requirements, 40 CFR 60, Subpart K, Ka, or Kb are not subject to the requirements of 40 CFR 60.692-3. **(40 CFR 60.692-3(d))**

24. Slop oil from an oil-water separator tank and oily wastewater from slop oil handling equipment shall be collected, stored, transported, recycled, reused, or disposed of in an enclosed system. Once slop oil is returned to the process unit or is disposed of, it is no longer within the scope of 40 CFR Part 60, subpart QQQ. Equipment used in handling slop oil shall be equipped with a fixed roof meeting the requirements of 40 CFR 60.692-3(a). **(40 CFR 60.692-3(e))**

25. Each oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment that is required to comply with paragraph 40 CFR 60.692-3(a), and not paragraph 40 CFR 60.692-3(b), may be equipped with a pressure control valve as necessary for proper system operation. The pressure control valve shall be set at the maximum pressure necessary for proper system operation, but such that the value will not vent continuously. **(40 CFR 60.692-3(f))**

26. A new, modified, or reconstructed aggregate facility shall comply with the requirements of 40 CFR 60.692-2 and 40 CFR 692-3. **(40 CFR 60.692-4)**

27. Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95% or greater or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816°C (1,500°F). **(40 CFR 60.692-5(a))**

28. Vapor recovery systems (for example, condensers and adsorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 % or greater. **(40 CFR 60.692-5(b))**

29. Flares used to comply with 40 CFR Part 60, Subpart QQQ shall comply with the requirements of 40 CFR 60.18. **(40 CFR 60.692-5(c))**

30. Closed vent systems and control devices used to comply with provisions of 40 CFR 60, subpart QQQ shall be operated at all times when emissions may be vented to them. **(40 CFR 60.692-5(d))**

31. Closed vent systems shall be designed and operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined during the initial and semiannual inspections by the methods specified in 40 CFR 60.696. **(40 CFR 60.692-5(e)(1))**
    a. Closed vent systems shall be purged to direct vapor to the control device. **(40 CFR 60.692-5(e)(2))**
    b. A flow indicator shall be installed on a vent stream to a control device to ensure that the vapors are being routed to the device. **(40 CFR 60.692-5(e)(3))**
    c. All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place. **(40 CFR 60.692-5(e)(4))**
    d. When emissions from a closed system are detected, first efforts at repair to eliminate the emissions shall be made as soon as practicable, but not later than 30 calendar days from the date the emissions are detected, except as provided in 40 CFR 60.692-6. **(40 CFR 60.692-5(e)(5))**

32. Delay of repair of facilities that are subject to the provisions of 40 CFR Part 60, Subpart QQQ will be allowed if the repair is technically impossible without a complete or partial refinery or process unit shutdown. **(40 CFR 60.692-6(a))**

33. Repair of such equipment, as referenced in 40 CFR 60.692-6(a) shall occur before the end of the next refinery or process unit shutdown. **(40 CFR 60.692-6(b))**

34. Delay of compliance of modified individual drain systems with ancillary downstream treatment components will be allowed if compliance with the provisions of 40 CFR Part 60, Subpart QQQ cannot be achieved without a refinery or process unit shutdown. **(40 CFR 60.692-7(a))**

35. Installation of equipment necessary to comply with the provisions of 40 CFR Part 60, Subpart QQQ shall occur no later than the next scheduled refinery or process unit shutdown. **(40 CFR 60.692-7(b))**

36. The permittee may elect to construct and operate a completely closed drain system. **(40 CFR 60.693-1(a))**

37. Each completely closed drain system shall be equipped and operated with a closed vent system and control device complying with the requirements of 40 CFR 60.692-5. **(40 CFR 60.693-1(b))**

38. The permittee must notify the Administrator in the report required in 40 CFR 60.7 that the permittee has elected to construct and operate a completely closed drain system. **(40 CFR 60.693-1(c))**

39. If the permittee elects to comply with the provisions of 40 CFR 60.693-1, then the permittee does not need to comply with the provisions of 40 CFR 60.692-2 or 40 CFR 60.694. **(40 CFR 60.693-1(d))**

40. Sewer lines shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces. **(40 CFR 60.693-1(e)(1))**

41. The portion of each unburied sewer line shall be visually inspected initially and semiannually thereafter for indication of cracks, gaps, or other problems that could result in VOC emissions. **(40 CFR 60.693-1(e)(2))**
    a. Whenever cracks, gaps, or other problems are detected, repairs shall be made as soon as practicable, but not later than 15 calendar days after identification, except as provided in 40 CFR 60.692-6. **(40 CFR 60.693-1(e)(3))**

42. The permittee may elect to construct and operate a floating roof on an oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment subject to the requirements of 40 CFR 60, Subpart QQQ which meets the following specifications. **(40 CFR 60.693-2(a))**
    a. Each floating roof shall be equipped with a closure device between the wall of the separator and the roof edge. The closure device is to consist of a primary seal and a secondary seal. **(40 CFR 60.693-2(a)(1))**
        i. The primary seal shall be a liquid-mounted seal or a mechanical shoe seal. **(40 CFR 60.693-2(a)(1)(i))**
            A. A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the separator and the floating roof. A mechanical shoe seal means a metal sheet held vertically against the wall of the separator by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof. **(40 CFR 60.693-2(a)(1)(i)(A))**
            B. The gap width between the primary seal and the separator wall shall not exceed 3.8 cm (1.5 in.) at any point. **(40 CFR 60.693-2(a)(1)(i)(B))**
            C. The total gap area between the primary seal and the separator wall shall not exceed 67 cm^2/m (3.2 in^2/ft) of separator wall perimeter. **(40 CFR 60.693-2(a)(1)(i)(C))**
        ii. The secondary seal shall be above the primary seal and cover the annular space between the floating roof and the wall of the separator. **(40 CFR 60.693-2(a)(1)(ii))**
            A. The gap width between the secondary seal and the separator wall shall not exceed 1.3 cm (0.5 in.) at any point. **(40 CFR 60.693-2(a)(1)(ii)(A))**
            B. The total gap area between the secondary seal and the separator wall shall not exceed 6.7 cm^2/m (0.32 $in.^2/ft$) of separator wall perimeter. **(40 CFR 60.693 - 2(a)(1)(ii)(B))**
        iii. The maximum gap width and total gap area shall be determined by the methods and procedures specified in 40 CFR 60.696(d). **(40 CFR 60.693-2(a)(1)(iii))**
            A. Measurement of primary seal gaps shall be performed within 60 calendar days after initial installation of the floating roof and introduction of refinery wastewater and once every 5 years thereafter. **(40 CFR 60.693-2(a)(1)(iii)(A))**
            B. Measurement of secondary seal gaps shall be performed within 60 calendar days of initial introduction of refinery wastewater and once every year thereafter. **(40 CFR 60.693-2(a)(1)(iii)(B))**
        iv. The permittee shall make necessary repairs within 30 calendar days of identification of seals not meeting the requirements listed in paragraphs 40 CFR 60.693-2(a)(1) (i) and (ii). **(40 CFR 60.693-2(a)(1)(iv))**
    b. Except as provided in paragraph 40 CFR 60.693-2(a)(4), each opening in the roof shall be equipped with a gasketed cover, seal, or lid, which shall be maintained in a closed position at all times, except during inspection and maintenance. **(40 CFR 60.693-2(a)(2))**
    c. The roof shall be floating on the liquid (i.e., off the roof supports) at all times except during abnormal conditions (i.e., low flow rate). **(40 CFR 60.693-2(a)(3))**
    d. The floating roof may be equipped with one or more emergency roof drains for removal of stormwater. Each emergency roof drain shall be fitted with a slotted membrane fabric cover that covers at least 90% of the drain opening area or a flexible fabric sleeve seal. **(40 CFR 60.693-2(a)(4))**
    e. Access doors and other openings shall be visually inspected initially and semiannually thereafter to ensure that there is a tight fit around the edges and to identify other problems that could result in VOC emissions. **(40 CFR 60.693-2(a)(5)(i))**

43. When a broken seal or gasket on an access door or other opening is identified, it shall be repaired as soon as practicable, but not later than 30 calendar days after it is identified, except as provided in 40 CFR 60.692-6. **(40 CFR 60.693-2(a)(5)(ii))**

44. The permittee must notify the EPA Administrator in the report required by 40 CFR 60.7 that the owner or operator has elected to construct and operate a floating roof under paragraph 40 CFR 60.693-2(a). **(40 CFR 60.693-2(b))**

45. For portions of the oil-water separator tank where it is infeasible to construct and operate a floating roof, such as the skimmer mechanism and weirs, a fixed roof meeting the requirements of 40 CFR 60.692-3(a) shall be installed. **(40 CFR 60.693-2(c))**

46. Except as provided in paragraph 40 CFR 60.693-2(c), if the permittee elects to comply with the provisions of 40 CFR 60.693-2, then the permittee does not need to comply with the provisions of 40 CFR 60.692-3 or 40 CFR 60.694 applicable to the same facilities. **(40 CFR 60.693-2(d))**

47. If, in the EPA Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved by the applicable requirement in 40 CFR 60.692, the EPA Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement. The notice may condition the permission on requirements related to the operation and maintenance of the alternative means. **(40 CFR 60.694(a))**

48. Any notice under paragraph 40 CFR 60.694 (a) shall be published only after notice and an opportunity for a hearing. **(40 CFR 60.694(b))**

49. Any person seeking permission under this section shall collect, verify, and submit to the Administrator information showing that the alternative means achieves equivalent emission reductions. **(40 CFR 60.694(c))**

50. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and QQQ, as they apply to EUNSPSQQQ-S1. **(40 CFR, Part 60, Subparts A and QQQ)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUEG4-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Diesel fuel-fired emergency electricity generator at the wastewater treatment plant covered by Permit 195-00.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx emissions	16.4 pph[2]	Hourly basis	EUEG4-S1	SC VI.1	**R 336.1201(3)**
2. NOx emissions	5.9 tpy[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month.	EUEG4-S1	SC VI.1	**R 336.1201(3)**

NOTE: NOx emissions may be determined using the emission factors submitted with the original Permit to Install application or with emission factors from AP-42

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Diesel Fuel	27,200 gpy[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EUEG4-S1	SC VI.1	**R 336.1201(3)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not combust or use as a fuel in EUEG4-S1 any diesel or fuel oil that has a sulfur content in excess of 0.30% by weight.[2] **(R 336.1402)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep the following information on a monthly and twelve month rolling basis for EUEG4-S1[2]: **(R 336.1201(3))**
   a. Hours of operation.
   b. Gallons of diesel fuel used.
   c. The sulfur content of any diesel fuel consumed.

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-WWTPGEN	6[2]	14[2]	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUBENZNESHAP-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

The equipment at the facility that is subject to the requirements of the Benzene Waste NESHAP: as defined in 40 CFR Part 61, Subpart FF. A list of subject equipment is maintained current by the refinery. Permit: 184-03.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall comply with the applicable testing requirements of 40 CFR 61.355, as they apply to EUBENZNESHAP-S1. **(R 336.1201, 40 CFR Part 61 Subparts A and FF)**

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall comply with the applicable monitoring and recordkeeping requirements of 40 CFR 61.355, as they apply to EUBENZNESHAP-S1. **(R 336.1201, 40 CFR Part 61, Subparts A and FF)**

VII. REPORTING

1. The permittee shall comply with the applicable reporting requirements of 40 CFR 61.355, as they apply to EUBENZNESHAP-S1. **(R 336.1201, 40 CFR Part 61 Subparts A and FF)**

2. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

3. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

4. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 61, Subparts A and FF, as they apply to EUBENZNESHAP-S1. **(40 CFR Part 61, Subparts A and FF)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUTANK23-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Tank 23, an internal floating roof tank for the storage of slop oil. Capacity = 455,000 gallons

Flexible Group IDs: FGIFRTANKS-S1, FGHOUPTANKS-S1

POLLUTION CONTROL EQUIPMENT

Internal Floating Roof

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Volatile Organic Compounds	0.2 Tons per month[2]	Monthly basis	EUTANK23-S1	SC VI.3	**R 336.1201(a), R 336.1702(a)**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Slop Oil	13.8 million gallons per month[2]	Monthly basis	EUTANK23-S1	SC VI.2	**R 336.1201(a) R 336.1702(a)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the tank with an internal floating roof with a welded deck and mechanical shoe primary seal. **(R 336.1702(a), R 336.1901)**

2. When EUTANK23 is taken out of hydrocarbon service, for any reason, the slotted guide pole control is not required to be in place during the time that EUTANK23 is out of service. **(40 CFR Part 60, Subparts A and Kb)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall perform inspections and monitor operating information for EUTANK23-S1 in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Kb.[2] **(40 CFR Part 60, Subparts A and Kb)**

2. The permittee shall keep records of the EUTANK23-S1 throughput of slop oil for each calendar month. All records shall be made available to the Department upon request.[2] **(R 336.1702(a))**

3. The permittee shall keep in a satisfactory manner, records of monthly VOC emissions calculations for EUTANK23-S1. All records shall be made available to the Department upon request.[2] **(R 336.1702(a))**

4. The permittee shall keep records of inspections and operating information for EUTANK23-S1 in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Kb. All records shall be made available to the Department upon request.[2] **(40 CFR Part 60, Subparts A and Kb)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provision of the federal Standards of Performance of New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Kb, as they apply to EUTANK23-S1. **(40 CFR Part 60 Subparts A and Kb)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUETHTANK-S1
EMISSION UNIT CONDITIONS

DESCRIPTION

Ethanol Tank, an internal floating roof tank for the storage of ethanol. Capacity 50,000 barrels.

Flexible Group ID: FGIFRTANKS-S1

POLLUTION CONTROL EQUIPMENT

Internal Floating Roof

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	0.45 tpy[2]	Based upon a 12-month rolling time period as determined at the end of each calendar month.	EUETHTANK-S1	SC VI.2	**R 336.1205(3), R 336.1225, R 336.1702(b)**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Ethanol	7,500 barrels per day[2]	Based upon a monthly average.	EUETHTANK-S1	SC VI.2	**R 336.1205(3), R 336.1225, R 336.1702(b)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall comply with all provisions of the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Kb, as they apply to EUETHTANK-S1. The provisions of 40 CFR Part 60, Subpart Kb include, but are not limited to, equipping EUETHTANK-S1 as follows:[2] **(R 336.1702(b), 40 CFR Part 60, Subparts A and Kb)**
   a. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be accomplished as rapidly as possible.[2] **(40 CFR 60.112b(a)(1)(i))**
   b. Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof: **(40 CFR 60.112b(a)(1)(ii))**
      i. A foam-or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam-or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.
      ii. Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.
      iii. A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

c. Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface. **(40 CFR 60.112b(a)(1)(iii))**
d. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use. **(40 CFR 60.112b(a)(1)(iv))**
e. Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. **(40 CFR 60.112b(a)(1)(v))**
f. Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. **(40CFR 60.112b(a)(1)(vi))**
g. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90% of the opening. **(40 CFR 60.112b(a)(1)(vii))**
h. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. **(40 CFR 60.112b(a)(1)(viii))**
   i. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. **(40 CFR 60.112b(a)(1)(ix))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUETHTANK-S1 with a bolted deck and mechanical shoe seal configuration, or a deck and seal configuration that results in the same or lower VOC emissions from the tank.[2] **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall perform inspections and monitor operating information for EUETHTANK-S1 in accordance with the federal Standards of Performance for New Stationary sources as specified in 40 CFR Part 60, Subparts A and Kb, as they apply to EUETHTANK-S1. The provisions of 40 CFR Part 60, Subpart Kb include, but are not limited to, the following[2]: **(R 336.1702(b), 40 CFR Part 60, Subparts A and Kb)**
   a. Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel. **(40 CFR 60.113b(a)(1))**
   b. For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12-months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, two 30-day extensions may be requested from the AQD District Supervisor in the inspection report required in 40 CFR 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. **(40CFR 60.113b(a)(2))**
   c. For vessels equipped with a double-seal system as specified in 40 CFR 60.112b(a)(1)(ii)(B): **(40 CFR 60.113b(a)(3))**
      i. Visually inspect the vessel as specified in 40 CFR 60.113b(a)(4) at least every five years; or
      ii. Visually inspect the vessel as specified in 40 CFR 60.113b(a)(2).

d. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 % open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than ten years in the case of vessels conducting the annual visual inspection as specified in 40 CFR 60.113b(a)(2) and 40 CFR 60.113b(a)(3)(ii) and at intervals no greater than five years in the case of vessels specified in 40 CFR 60.113b(a)(3)(i). **(40 CFR 60.113b(a)(4))**

2. The permittee shall keep VOC emission calculations and monthly throughput records for EUETHTANK-S1. All records shall be made available to the Department upon request.[2] **(R 336.1205(3), R 336.1225)**

3. The permittee shall keep records of inspections and operating information for EUETHTANK-S1 in accordance with the federal Standards of Performance for New Stationary sources as specified in 40 CFR Part 60, Subparts A and Kb, as they apply to EUETHTANK-S1. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. The provisions of 40 CFR Part 60, Subpart Kb include, but are not limited to, the following: **(R 336.1702(b), R 336.1910, 40 CFR Part 60, Subparts A and Kb)**
   a. Keep a record of each inspection performed as required by 40 CFR 60.113b(a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). **(40 CFR 60.115b(a)(2)**
   b. For each storage vessel as specified in 40 CFR 60.110b(a), keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept for the life of the storage vessel. **(40 CFR 60.116b(b))**
   c. Except as provided in 40 CFR 60.116b(f) and (g), for each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa, the permittee shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. **(40 CFR 60.116b(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall submit reports for EUETHTANK-S1 in accordance with the federal Standards of Performance for New Stationary sources as specified in 40 CFR Part 60, Subparts A and Kb, as they apply to EUETHTANK-S1. The provisions of 40 CFR Part 60 ,Subpart Kb include, but are not limited to, the following:[2] **(R 336.1702(b), R 336.1910, 40 CFR Part 60, Subparts A and Kb)**
   a. If the permittee installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the AQD District Supervisor stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b). **(40 CFR 60.110b(e)(3))**
   b. After installing the internal floating roof in accordance with 40 CFR 60.112b(a)(1), furnish the AQD District Supervisor with a report that describes the control equipment and certifies that the control equipment meets the specifications of 40 CFR 60.112b(a)(1) and 40 CFR 60.113b(a)(1). This report shall be an attachment to the notification required by 40 CFR 60.7(a)(3). **(40 CFR 60.115b(a)(1))**
   c. If any of the conditions described in 40 CFR 60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR 60.113b(a)(2), a report shall be furnished to the AQD District Supervisor within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made. **(40 CFR 60.115b(a)(3))**
   d. After each inspection required by 40 CFR 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 40 CFR 60.113b(a)(3)(ii), a report shall be furnished to the AQD District Supervisor within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR 61.112b(a)(1) or 40 CFR 60.113b(a)(3) and list each repair made. **(40 CFR 60.115b(a)(4))**

2. The permittee shall submit notifications for EUETHTANK-S1 in accordance with the federal Standards of Performance for New Stationary sources as specified in 40 CFR Part 60, Subparts A and Kb, as they apply to EUETHTANK-S1. The provisions of 40 CFR Part 60, Subpart Kb include, but are not limited to, notifying the AQD District Supervisor in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by 40 CFR 60.113b(a)(1) and (a)(4) to afford the AQD District Supervisor the opportunity to have an observer present. If the inspection required by 40 CFR 60.113b(a)(4) is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the AQD District Supervisor at least seven days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the AQD District Supervisor at least seven days prior to the refilling.[2] **(40 CFR 60.113b(a)(5))**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

D-S1. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGHEATERS-S1	All refinery heaters and boilers that burn refinery fuel gas (NSPS, 40 CFR Part 60, Subpart J and where applicable Subpart Ja) Permit: 63-08E	EU04-VACHTR-S1, EU04-VAC2HTR-S1, EU05-CRUDEHTR-S1, EU08-GOHTCHARHTR-S1, EU08-GOHTCHARHTR2-S1, EU09-ALKYDIBREBHTR-S1, EU11-FCCUCHARHTR-S1, EU14-CCRPLCHARHTR-S1, EU14-CCRPLINTHTR-S1, EU16-NHTSTRIPREBOIL-S1, EU16-NHTCHARHTR-S1, EU19-KHTCHARHTR-S1, EU22-FUELOILHTR-S1, EU70-COKERHTR-S1, EU77-DHTHTR-S1
FGCOOLTOWERS-S1	Cooling towers. Permit: 63-08E	EUCOOLTOWERA-S1, EUCOOLTOWERC-S1, EUCOOLTOWERD-S1, EUCOOLTOWERE-S1, EUCOOLTOWERF-S1, EUCOOLTOWERG-S1, EUCOOLTOWERH-S1, EUCOOLTOWERNEW-S1
FGREFINEFLARES-S1	Refinery flares existing prior to the Detroit Heavy Oil Upgrade Project. Permit: 63-08E	EUCRUDEFLARE-S1, EU-UNIFFLARE-S1, EU-ALKYFLARE-S1, EU-CPFLARE-S1

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGHOUPTANKS-S1	Storage tanks associated with the Detroit Heavy Oil Upgrade Project. Permit: 63-08E	EUTANK16-S1, EUTANK17-S1, EUTANK19-S1, EUTANK23-S1, EUTANK24-S1, EUTANK27-S1, EUTANK28-S1, EUTANK40-S1, EUTANK45-S1, EUTANK46-S1, EUTANK47-S1, EUTANK48-S1, EUTANK49-S1, EUTANK50-S1, EUTANK53-S1, EUTANK54-S1, EUTANK55-S1, EUTANK56-S1, EUTANK57-S1, EUTANK58-S1, EUTANK59-S1, EUTANK60-S1, EUTANK61-S1, EUTANK62-S1, EUTANK63-S1, EUTANK64-S1, EUTANK70-S1, EUTANK71-S1, EUTANK72-S1, EUTANK100-S1, EUTANK101-S1, EUTANK102-S1, EUTANK103-S1, EUTANK104-S1, EUTANK105-S1, EUTANK106-S1, EUTANK107-S1, EUTANK108-S1, EUTANK109-S1, EUTANK110-S1, EUTANK112-S1, EUTANK113-S1, EUTANK114-S1, EUTANK115-S1, EUTANK116-S1, EUTANK120-S1, EUTANK125-S1, EUTANK126-S1, EUTANK127-S1, EUTANK128-S1, EUTANK129-S1, EUTANK130-S1, EUTANK507-S1, EUTANK508-S1, EUTANK601-S1, EUTANK216-S1, EU29TANK40-S1, EU29TANK41-S1

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGDHOUPANNUAL-S1	These emission units and flexible groups used the Actual-to-Potential test for PSD applicability. The emission limits in this group serve to limit the Potential to Emit of covered equipment. ~~These emission units and flexible groups used the Actual-to-Potential test for PSD applicability. The emission limits in this group serve to limit the Potential to Emit of covered equipment.~~ ~~Permit: 63-08E~~	EU04-VACUUM-S1, EU04-VACHRT-S1 EU04-VAC2HTR-S1, EU05-CRUDE-S1 EU05-CRUDEHTR-S1, EU08-GOHT-S1 EU08-GOHTCHARHTR-S1 EU09-ALKYDIBREBHTR-S1 EU09-ALKYLATION-S1 EU11-FCCU-S1, EU12-GASCON-S1 EU16-NAPHHYTREAT-S1 EU16-NHTSTRIPREBOIL-S1 EU16-NHTCHARHTR-S1 EU13-PROPYLENE-S1 EU14-CRRPLATFORMER-S1 EU14-CCRPLCHARHTR-S1 EU14-CCRPLINTHTR-S1 EU14-CCRPLCATREG-S1, EU19-KEROHYTREAT-S1 EU19-KHTCHARHTR-S1 EU21-CPTREATER-S1 EU21-S2OFFGAS-S1, EU22-FUELOILHTR-S1 EU22-LPGRAILRACK-S1 EU22-TANKFARMS-S1 EU27-ZURNBOILER-S1 EU27-B&WBOILER1-S1, EU29-WASTEWATER-S1 EU38-ROUGETERMNL-S1 EU41-SOURWATER-S1 EU42-43SULRECOV-S1, EU70-COKER-S1, EU70-COKERHTR-S1 EU-COKERFLARE-S1, EU72-SULRBLOCK2-S1, EU73-SOURWATER-S1 EU76-UTILITIES-S1 EU77-DHTHYTREAT-S1 EU77-DHTHTR-S1 EU78-FUELGASRECOVERY-S1 EU99LPGLOADRACK-S1 EUCOOLTOWERA-S1 EUCOOLTOWERC-S1 EUCOOLTOWERD-S1 EUCOOLTOWERE-S1 EUCOOLTOWERF-S1 EUCOOLTOWERG-S1 EUCOOLTOWERH-S1 EUCOOLTOWERNEW-S1 EUTANK104-S1, EUTANK120-S1 EUTANK216-S1, EUTANK601-S1 FG29-IGF1-S1, FG-HEATERS-S1, FG-PROCUNITS-S1, FGCOOLTOWERS-S1, FGHOUPTANKS-S1 EU08-GOHTCHARHTR2-S1

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGMACTDDDDD-S1	All boilers and process heaters at the Detroit Refinery are regulated under the existence source standards in 40 CFR Part 63, Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Permit: 63-08E	All boilers and process heaters at the Detroit Refinery
FGFLARES-S1	Refinery Flares (NSPS, 40 CFR Part 60, Subpart J and where applicable Subpart Ja) Permit: 63-08E	EUCRUDEFLARE-S1, EUUNIFFLARE-S1, EUALKYFLARE-S1, EUCPFLARE-S1 EU-COKERFLARE-S1
FGPROCVENTS-S1	Miscellaneous process vents subject to Refiner MACT1, (40 CFR Part 63, Subpart CC) Permit: 63-08E	EUVENT9V50-S1, EUVENT14SUMP-S1, EUVENT21XF-S1, EUVENT14XH-S1, EUVENT21V47-S1, EU21-S2OFFGAS-S1
FGGROUP2-S1	40 CFR Part 63, Subpart CC Group 2 Storage Tanks. Permit: 63-08E	EUTANK11-S1, EUTANK16-S1, EUTANK17-S1, EUTANK18-S1, EUTANK24-S1, EUTANK27-S1, EUTANK28-S1, EUTANK30-S1, EUTANK31-S1, EUTANK50-S1, EUTANK52-S1, EUTANK54-S1, EUTANK56-S1, EUTANK59-S1, EUTANK60-S1, EUTANK62-S1, EUTANK63-S1, EUTANK64-S1, EUTANK70-S1, EUTANK71-S1, EUTANK100-S1, EUTANK102-S1, EUTANK103-S1, EUTANK104-S1, EUTANK105-S1, EUTANK106-S1, EUTANK107-S1, EUTANK120-S1, EUTANK125-S1, EUTANK126-S1, EUTANK127-S1, EUTANK128-S1, EUTANK314-S1, EUTANK315-S1, EUTANK316-S1, EUTANK317-S1, EUTANK318-S1, EUTANK319-S1, EUTANK320-S1, EUTANK324-S1
FGIFRTANKS-S1	Internal floating roof tanks (IFR) that are subject to 40 CFR Part 63, Subpart CC as Group 1 Vessels or subject to 40 CFR 60, Subpart Kb. These tanks also may be subject to Michigan Air Pollution Control Rule 604 (R336.1604). This represents a consolidated requirement for internal floating roof tanks. Permit: 63-08E	EUTANK19-S1, EUTANK23-S1, EUTANK40-S1, EUTANK45-S1, EUTANK46-S1, EUTANK47-S1, EUTANK48-S1, EUTANK49-S1, EUTANK51-S1, EUTANK52-S1, EUTANK53-S1, EUTANK55-S1, EUTANK57-S1, EUTANK58-S1, EUTANK61-S1, EUTANK72-S1, , EUTANK101-S1, EUTANK104-S1, EUTANK116-S1, , EUTANK120-S1, EUETHTANK-S1, EUTANK507-S1, EUTANK508-S1, EUTANK216-S1 EUTANK29T79-S1, EUTANK22T118-S1

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGEFRTANKS-S1	External floating roof tanks (EFR) that are subject to 40 CFR Part 63, Subpart CC as Group 1 Vessels or subject to 40 CFR Part 60, Subpart Kb. These tanks may also be subject to Michigan Air Pollution Control Rule 623 (R 336.1623) and/or NSPS Subpart QQQ. This consolidated requirement basically adopts NSPS Kb for these EFR tanks. Permit: 63-08E	EUTANK32-S1, EUTANK33-S1, EUTANK108-S1, EUTANK109-S1, EUTANK110-S1, EUTANK112-S1, EUTANK113-S1, EUTANK114-S1, EUTANK115-S1, EUTANK128-S1, EUTANK129-S1, EUTANK130-S1, EUTANK601-S1, EU29TANK40-S1, EU29TANK41-S1, EUTANK127-S1
FGTANKS133&134-S1	Two tanks which store asphalt and have visible emission control equipment. Permit: 63-08E	EUTANK133-S1, EUTANK134-S1
FGPROCUNITS-S1	Process groups subject to leak detection and repair requirements (LDAR). This flexible grouping is subject to the consolidated LDAR requirements of 40 CFR Part 60, Subparts VV or VVa; 40 CFR Part 60, Subparts GGG or GGGa; 40 CFR Part 63, Subpart CC as listed in Section V and VI of this table. For the purpose of this consolidated LDAR requirement, the following are affected facilities: (1) compressors and (2) the group of all equipment {see definition in 40 CFR 60.591} within a process unit. Permit: 63-08E	EU04-VACUUM-S1, EU05-CRUDE-S1, EU07-DHT-S1, EU08-GOHT-S1, EU09-ALKYLATION-S1, EU11-FCCU-S1, EU12-GASCON-S1, EU13-PROPYLENE-S1, EU14-CCRPLATFORMER-S1, EU16-NAPHHYTREAT-S1, EU19-KEROHYTREAT-S1, EU21-CPTREATER-S1, EU22-TANKFARMS-S1, EU22-MELVLPGRAILRACK-S14, EU22-ASPHLOAD-S1, EU22-PENTLOAD-S1 EU29-WASTEWATER-S1, EU38-ROUGETERMNL-S1, EU42-43SULRECOV-S1, EU99-LPGLOADRACK-S1, EU41-SOURWATER-S1, EU70-COKER-S1, EU72-SULRBLOCK2-S1, EU73-SOURWATER2-S1, EU77-DHTHYTREAT-S1, EU76-UTILITIES-S1, EU78-FUELGASRECOVERY-S1
FG29-IGF-S1	Two induced gas flotation units which are part of the wastewater treatment plant and are covered by Permit 190-00A and 63-08E	EU29-IGF1-S1, EU29-IGF2-S1
FG29TANKS40-41-S1	Two external floating roof (EFR) tanks for slop oil in the wastewater treatment plant (WWTP). These tanks are subject to 40 CFR Part 60, Subpart QQQ. Permit: 63-08E	EU29TANK40-S1, EU29TANK41-S1

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGCRUDETANKS-S1	External floating roof (EFR) tanks that are subject to 40 CFR Part 63, Subpart CC as Group 1 Vessels or subject to 40 CFR Part 60, Subpart Kb. These tanks may also be subject to Michigan Air Pollution Control Rule 623 (R 336.1623) and/or NSPS Subpart QQQ. This consolidated requirement basically adopts NSPS Kb for these EFR tanks. Permit: 63-08E	EUTANK112-S1, EUTANK113-S1, EUTANK114-S1, EUTANK115-S1, EUTANK129-S1, EUTANK130-S1
FGNAPHTHATANKS-S1	Internal and external floating roof tanks that are subject to 40 CFR Part 63, Subpart CC as Group 1 Vessels or subject to 40 CFR Part 60, Subpart Kb. These tanks may also be subject to Michigan Air Pollution Control Rule 623 (R 336.1623) and/or NSPS Subpart QQQ. This consolidated requirement basically adopts NSPS Kb for these tanks. Permit: 63-08E	EUTANK19-S1, EUTANK40-S1, EUTANK45-S1, EUTANK46-S1, EUTANK47-S1, EUTANK48-S1, EUTANK49-S1, EUTANK53-S1, EUTANK55-S1, EUTANK57-S1, EUTANK58-S1, EUTANK61-S1, EUTANK72-S1, EUTANK101-S1, EUTANK104-S1, EUTANK108-S1, EUTANK109-S1, EUTANK110-S1, EUTANK116-S1, , EUTANK120-S1, EUTANK127-S1, EUTANK128-S1, EUTANK29T79-S1, EUETHTANK-S1 EUTANK22T118-S1,
FGCOLDCLEANERS-S1	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	EUNEWCOLDCLEANERS-S1
FGRULE290-S1	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 290.	EUTANK15-S1
FGASPHALTLOADING-S1/S2	All asphalt cement loading operations at the stationary source for railcars, trucks, and barges. Permit: 142-11A	EU22-ASPHLOAD-S1, *EU_ASPHALT-S2, EU38-BARGELOAD-S1 *Flexible group has equipment that is located in Section 1 and 2 of the ROP.
FG-RagLayerTanks-S1	Storage to allow improved management of the rag layer formed in the desalter. Permit 96-11	EU5TANK18-S1, EU5TANK19-S1
FGFLARES-S1	Refinery Flares (NSPS, 40 CFR Part 60, Subpart J and where applicable Subpart Ja)	EUCRUDEFLARE-S1, EUUNIFFLARE-S1, EUALKYFLARE-S1, EUCPFLARE-S1, EU-COKERFLARE-S1
FG-BOILERS	The two existing refinery boilers and the temporary boiler that is to be used to allow one of those boilers to power down. Permit: 18-12B	EU27-ZURNBOILER, EU27-B&WBOILER1, EU-TEMP_BOILER-S1

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGTIER3-S1	These emission units and flexible groups used the hybrid test for PSD applicability. Permit: 118-15	EU08-GOHTCHARHTR-S1, EU08-GOHTCHARHTR2-S1, EU08-GOHT-S1, EU71-H2HTR-S3, EU71-H2STEAMSYS-S3, EU42-43SULRECOV-S1, EU72-SULRBLOCK2-S1
FGTIER3SO2-S1	These emission units will show that there is no increase in sulfur dioxide emissions due to the Tier 3 Fuels project. Permit:118-15	EU08-GOHTCHARHTR-S1, EU08-GOHTCHARHTR2-S1, EU11-FCCU-S1, EU71-H2HTR-S1, EU42-43SULRECOV-S1, EU72-SULRBLOCK2-S1
FGPVTANKS-S4	Pressure vessels for the storage of petroleum liquids with a true vapor pressure greater than 1.5 psia	EU22-V88-S4, EU22-V89-S4, EU22-V90-S4, EU22-V91-S4, EU22-V92-S4, EU22-V93-S4, EU22-V94-S4, EU22-V95-S4, EUTANK87-S4, EUTANK96-S4, EUTANK176-S4

FGHEATERS-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

All refinery heaters that burn refinery fuel gas (NSPS, 40 CFR 60, Subpart J and where applicable Ja). Permit: 63-08E

Emission Units: EU04-VACHTR-S1, EU04-VAC2HTR-S1, EU05-CRUDEHTR-S1, EU08-GOHTCHARHTR-S1, EU08-GOHTCHARHTR2-S1, EU09-ALKYDIBREBHTR-S1, EU11-FCCUCHARHTR-S1, EU14-CCRPLCHARHTR-S1, EU14-CCRPLINTHTR-S1, EU16-NHTSTRIPREBOIL-S1, EU16-NHTCHARHTR-S1, EU19-KHTCHARHTR-S1, EU22-FUELOILHTR-S1, EU70-COKERHTR-S1, EU77-DHTHTR-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	0.05 lb/MMBTU[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month.	EU04-VACHTR-S1	SC VI.~~7~~8	**R 336.1205, R 336.2802, 40 CFR 52.21, Consent Order No. 01-40119**
2. NOx	0.060 lb/MMBTU or 60 ppmv, dry basis corrected to 0%O_2[2]	30 day rolling average basis	EU04-VACHTR-S1	SC VI.~~7~~8	**40 CFR Part 60, Subpart Ja**
3. NOx	0.05 lb/MMBTU[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU05-CRUDEHTR-S1	SC VI.~~7~~8	**R 336.1205, R 336.2802, 40 CFR 52.21, Consent Order No. 01-40119.**
4. NOx	0.**060** lb/MMBTU or 60 ppmv dry basis corrected to 0%O_2[2]	30 day rolling average basis	EU05-CRUDEHTR-S1	SC VI.~~7~~8	**40 CFR Part 60, Subpart Ja**
5. NOx	0.05 lb/MMBTU[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU08-GOHTCHARHTR-S1	SC VI.~~5~~6	**R 336.1205, R 336.2802, 40 CFR 52.21**
6. NOx	0.05 lb/MMBTU[2]	Three hour average	EU11-FCCUCHARHTR-S1	SC V.8	**R 336.1205, R 336.2802, 40 CFR 52.21**
7. NOx	0.05 lb/MMBTU[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU14-CCRPLCHARHTR-S1	SC V.8, VI.~~6~~7	**R 336.1205, R 336.2802, 40 CFR 52.21**
8. NOx	0.05 lb/MMBTU[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU14-CCRPLINTHTR-S1	SC V.8, SC VI.~~6~~7	**R 336.1205, R 336.2802, 40 CFR 52.21**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
9. NOx	0.20 lb/MMBTU[2]	Three hour average	EU16-NHTCHARHTR-S1	SC V.6	**R 336.1205, R 336.2802, 40 CFR 52.21**
10. NOx	0.20 lb/MMBTU[2]	Three hour average	EU16-NHTSTRIPREBOIL-S1	SC V.6	**R 336.1205, R 336.2802, 40 CFR 52.21**
11. NOx	0.20 lb/MMBTU[2]	Three hour average	EU19-KHTCHARHTR-S1	SC V.6	**R 336.1205, R 336.2802, 40 CFR 52.21**
12. NOx	0.10 lb/MMBTU[2]	Three hour average	EU22-FUELOILHTR-S1	SC V.6	**R 336.1205, R 336.2802, 40 CFR 52.21**
13. NOx	0.040 lb/MMBTU or 40 ppmv dry basis corrected to 0% O_2[2]	30 day rolling average basis	EU04-VAC2HTR-S1	SC VI.~~7~~8	**R 336.1205, R 336.2802, 40 CFR 52.21 40 CFR Part 60 Subpart Ja**
14. NOx	0.05 lb/MMBTU[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU70-COKERHTR-S1	SC VI.~~7~~8	**R 336.1205, R 336.2802, 40 CFR 52.21**
15. NOx	0.060 lb/MMBTU or 60 ppmv dry basis corrected to 0% O_2[2]	30 day rolling average basis	EU70-COKERHTR-S1	SC VI.~~7~~8	**40 CFR Part 60, Subpart Ja**
16. NOx	0.040 lb/MMBTU or 40 ppmv dry basis corrected to 0% O_2[2]	30 day rolling average basis	EU77-DHTHTR-S1	SC VI.~~7~~8	**R 336.1205, R 336.2802, 40 CFR 52.21 40 CFR Part 60, Subpart Ja**
17. NOx	0.040 lb/MMBTU or 40 ppmv dry basis corrected to 0% O_2[2]	30 day rolling average basis	EU09-ALKYDIBREBHTR-S1	SC VI.~~7~~8	**R 336.1205, R 336.2802, 40 CFR 52.21 40 CFR Part 60 Subpart Ja**
18. NOx	82 tpy[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month.	EU04-VACHTR-S1 and EU05-CRUDEHTR-S1 combined.	SC VI.~~7~~8	**R 336.1205, R 336.1201(3) Consent Order No. 01-40119, Act 451, Part 55**
19. NOx	0.040 lb/MMBTU or 40 ppmv, dry basis corrected to 0%O_2	30 day rolling average basis	EU08-GOHTCHARHTR2-S1	SC VI.5	**R 336.1205 40 CFR 52.21 (c) and (d) 40 CFR Part 60 Subpart Ja**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
~~19.~~20. PM	0.0019 lb/MMBTU[2]	Three hour average	Each emission unit in FGHEATERS-S1 except EU08-GOHTCHATHYT2-S1 For EU11-FCCUCHARHTR-S1, this limit applies only to the primary fuel to the heater (refinery fuel gas).	SC V.1, SC V.3, SC V.4, SC V.5, SC V.6, SC V.8, SC V.9, SC V.10, SC V.11 SC V.12	**R 336.1205, R 336.2802, 40 CFR 52.21**
21. PM	0.0019 lb/MMBTU	Three hour average	EU08-GOHTCHARHTR2-S1	GC 13	**R336.1205**
~~20.~~22. PM10	0.0076 lb/MMBTU[2]	Three hour average	Each emission unit in FGHEATERS-S1. For EU11-FCCUCHARHTR-S1, this limit applies only to the primary fuel to the heater (refinery fuel gas).	SC V.1, SC V.3, SC V.4, SC V.5, SC V.6, SC V.8, SC V.10 SC V.15	**R 336.1205, R 336.2802, 40 CFR 52.21**
~~21.~~23. PM2.5	0.0076 lb/MMBTU[2]	Three hour average	EU09-ALKYDIBREBHTR-S1	SC V.5	**R 336.1205, R 336.2903, 40 CFR Part 51 Appendix S**
24. PM2.5	0.0076 lb/MMBTU	Three hour average	EU08-GOHTCHARHTR2-S1	SC V.15	**R 336.1205 40 CFR 52.21 (c) and (d)**
~~22.~~25. CO	0.01 lb/MMBTU[3]	Based on an annual rolling average, as determined at the end of each calendar month	EU05-CRUDEHTR-S1	SC VI.~~8~~10	**R 336.1201(3)**
~~23.~~26. CO	0.01 lb/MMBTU[3]	Based on an annual rolling average, as determined at the end of each calendar month	EU70-COKERHTR-S1	SC VI.~~8~~10	**R 336.1201(3)**
~~24.~~27. CO	0.02 lb/MMBTU[3]	Based on an annual rolling average, as determined at the end of each calendar month	EU11-FCCUCHARHTR-S1	SC VI.~~8~~10	**R 336.1201(3)**
~~25.~~28. CO	0.013 lb/MMBTU[3]	Based on an annual rolling average, as determined at the end of each calendar month	EU14-CCRPLCHARHTR-S1	SC VI.~~8~~10	**R 336.1201(3)**
~~26.~~29. CO	0.01 lb/MMBTU[3]	Based on an annual rolling average, as determined at the end of each calendar month	EU04-VACHTR-S1	SC VI.~~8~~10	**R 336.1201(3)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
~~27.~~30. CO	0.02 lb/MMBTU[3]	Based on an annual rolling average, as determined at the end of each calendar month	EU08-GOHTCHARHTR-S1	SC VI.~~8~~10	**R 336.1201(3)**
~~28.~~31. CO	0.013 lb/MMBTU[3]	Based on an annual rolling average, as determined at the end of each calendar month	EU14-CCRPLINTHTR-S1	SC VI.~~8~~10	**R 336.1201(3)**
~~29.~~32. CO	0.02 lb/MMBTU[3]	Based on an annual rolling average, as determined at the end of each calendar month	EU04-VAC2HTR-S1	SC VI.~~8~~10	**R 336.1201(3)**
~~30.~~33. CO	0.02 lb/MMBTU[3]	Based on an annual rolling average, as determined at the end of each calendar month	EU77-DHTHTR-S1	SC VI.~~8~~10	**R 336.1201(3)**
~~31.~~34. CO	0.02 lb/MMBTU[2]	Three hour average	EU16-NHTCHARHTR-S1, EU16-NHTSTRIPREBOIL-S1, EU19-KHTCARHTR, EU22-FUELOILHTR-S1, EU09-ALKYDIBREBHTR-S1	SC V.5, SC V.6	**R 336.1205, R 336.2802, 40 CFR 52.21**
35. CO	0.01 lb/MMBTU[3]	Based on an annual rolling average, as determined at the end of each calendar month	EU08-GOHTCHARHTR2-S1	SC VI.11	**R 336.1201(3)**
~~32.~~36. VOC	0.0055 lb/MMBTU[2]	Three hour average	Each emission unit in FGHEATERS-S1	SC V.1, SC V.2, SC V.3, SC V.4, SC V.5, SC V.9, SC V.11, SC V.12 SC V.15	**R 336.1702**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Hydrogen sulfide content of the refinery fuel gas burned in any combustion device in FGHEATERS-S1 except EU08-GOHTCHARHTR2-S1	0.10 grain per dry standard cubic foot (230 milligrams per dry standard cubic meter or 160 ppmdv)[2]*	Based upon a three hour average	FGHEATERS-S1 except EU08-GOHTCHARHTR2-S1	SC VI.1	**R 336.1226(d), 40 CFR 60.104(a)(1), 40 CFR 60.102a(g)(1)(ii), 40 CFR Part 60, Subparts A and J/Ja**
2. H_2S content of the refinery fuel gas	0.10 grain per dry standard cubic foot (230 milligrams per dry standard cubic meter or 162 ppmdv)	Based upon a three hour average	EU08-GOHTCHARHTR2-S1	SC VI.2	**40 CFR 60.102a(g)(1)(ii) 40 CFR Part 60 Subparts A and Ja**
2-3. Hydrogen sulfide content of the refinery fuel gas burned in any combustion device in FGHEATERS-S1	60 ppmdv[3]	Annual rolling average, as determined at the end of each calendar month	FGHEATERS-S1 except EU08-GOHTCHARHTR2-S1	SC VI.1	**R 336.1201(3) 40 CFR 60.102a(g)(1)(ii)**
4. H_2S content of refinery fuel gas	60 ppmdv	Daily on a 365 successive calendar day rolling average basis	EU08-GOHTCHARHTR2-S1	SC VI.2	**40 CFR 60.102a(g)(1)(ii)**
5. TRS content of refinery fuel gas	45 ppmv[3]	Daily on a 365 successive calendar day rolling average basis	EU08-GOHTCHARHTR2-S1	SC VI.3	**R 336.1201(3)**

*Compliance with this limit shall be considered compliance with the limits of R 336.1406(1) which have been subsumed under this streamlined requirement.

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The heat input to EU04-VACHTR-S1 shall not exceed 177 MMBTU/hr on a daily average.[2] **(R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21)**

2. The heat input to EU05-CRUDEHTR-S1 shall not exceed 240 MMBTU/hr on a daily average.[2] **(R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21)**

3. The heat input to EU08-GOHTHTR-S1 shall not exceed 115 MMBTU/hr on a daily average.[2] **(R 336.1205(1), R 336.1225, R 336.2802, 40 CFR 52.21)**

4. The heat input to EU09-ALKYDIBREBHTR-S1 shall not exceed 88 MMBTU/hr on a daily average.[2] **(R 336.1205(1), R 336.1225, R 336.2802, 40 CFR 52.21)**

5. The heat input to EU09-ALKYDIBREBHTR-S1 shall not exceed 84 MMBTU/hr on an annual rolling average, as determined at the end of each calendar month.[2] **(R 336.1201(3))**

6. The heat input to EU11-FCCUCHARHTR-S1 shall not exceed 130 MMBTU/hr on a daily average.[2] **(R 336.1205(1), R 336.1225, R 336.2802, 40 CFR 52.21)**

7. The heat input to EU14-CCRPLCHARHTR-S1 shall not exceed 138 MMBTU/hr on a daily average.[2] **(R 336.1205(1), R 336.1225, R 336.2802, 40 CFR 52.21)**

8. The heat input to EU14-CCRPLINTHTR-S1 shall not exceed 138 MMBTU/hr on a daily average.[2] **(R 336.1205(1), R 336.1225, R 336.2802, 40 CFR 52.21)**

9. The heat input to EU16-NHTCHARHTR-S1 shall not exceed 64 MMBTU/hr on a daily average.[2] **(R 336.1205(1), R 336.1225, R 336.2802, 40 CFR 52.21)**

10. The heat input to EU16-NHTSTRIPREBOIL-S1 shall not exceed 46 MMBTU/hr on a daily average.[2] **(R 336.1205(1), R 336.1225, R 336.2802, 40 CFR 52.21)**

11. The heat input to EU19-KHTCHARHTR-S1 shall not exceed 18 MMBTU/hr on a daily average.[2] **(R 36.1205(1), R 336.1225, R 336.2802, 40 CFR 52.21)**

12. The heat input to EU22-FUELOILHTR-S1 shall not exceed 7.5 MMBTU/hr on a daily average.[2] **(R 336.1205(1), R 336.1225, R 336.2802, 40 CFR 52.21)**

13. The heat input to EU04-VAC2HTR-S1 shall not exceed 96 MMBTU/hr on a daily average.[2] **(R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21)**

14. The heat input to EU04-VAC2HTR-S1 shall not exceed 71 MMBTU/hr on an annual rolling average, as determined at the end of each calendar month.[2] **(R 336.1201(3))**

15. The heat input to EU70-COKERHTR-S1 shall not exceed 285 MMBTU/hr on a daily average.[2] **(R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21)**

16. The heat input to EU70-COKERHTR-S1 shall not exceed 250 MMBTU/hr on an annual rolling average, as determined at the end of each calendar month.[2] **(R 336.1201(3))**

17. The heat input to EU77-DHTHTR-S1 shall not exceed 91 MMBTU/hr on a daily average.[2] **(R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21)**

18. The permittee shall not operate EU04-VACHTR-S1, EU05-CRUDEHTR-S1, EU08-GOHTHTR-S1, EU11-FCCUCHARHTR-S1, EU14-CCRPLCHARHTR-S1, or EU14-CCRPLINTHTR-S1 unless the unit's low NOx burners are installed, maintained, and operated in a satisfactory manner.[2] **(R 336.1205, R 336.1910, R 336.2802, 40 CFR 52.21)**

19. The permittee shall not operate EU04-VAC2HTR-S1, EU09-ALKYDIBREBHTR-S1, EU70-COKERHTR-S1, or EU77-DHTHTR-S1 unless the unit's ultra-low-NO_x burners are installed, maintained, and operated in a satisfactory manner.[2] **(R 336.1205, R 336.1910, R 336.2802, 40 CFR 52.21)**

20. The permittee shall only fire refinery fuel gas and/or sweet natural gas in FGHEATERS-S1.[2] **(R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21)**

21. The heat input to EU08-GOHTCHARHTR2-S1 shall not exceed 115 MMBTU/hr on a daily average.**(R 336.1205, R 336.1225, 40 CFR 52.21 (c) and (d))**

22. The heat input to EU08-GOHTCHARHTR2-S1 shall not exceed 85 MMBTU/hr on an annual rolling average, as determined at the end of each calendar month. **(R 336.1205, 40 CFR 52.21 (c) and (d))**

23. The permittee shall not operate EU08-GOHTCHARHTR2-S1 unless the unit's low-NO_x burners are installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1910, 40 CFR 52.21 (c) and (d))**

24. The combined heat input to EU08-GOHTCHARHTR-S1 and EU08-GOHTCHARHTR2-S1 shall not exceed 100 MMBTU/hr on an annual rolling average, as determined at the end of each calendar month.[3] **(R 336.1201(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Once during the five year term of this permit and every five years thereafter, the permittee shall verify emission rates from EU04-VAC2HTR-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. For verification of PM emissions, testing shall include both the filterable and condensable fractions.[2] **(R 336.2001, R 336.2003, R 336.2004)**
   PM10 **(R 336.1205, R 336.2802, 40 CFR 52.21)**
   PM **(R 336.1205, R 336.2802, 40 CFR 52.21)**
   VOC **(R 336.1702)**

2. Once during the five year term of this permit and every five years thereafter for sulfuric acid mist, and every three years thereafter for VOC, the permittee shall verify emission rates from EU04-VAC2HTR-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[3] **(R 336.2001, R 336.2003, R 336.2004)**
   VOC[3] **(R 336.1201(3))**
   Sulfuric acid mist[3] **(R 336.1201(3))**

3. Once during the five year term of this permit and annually thereafter for PM10, PM and VOC and every five years thereafter for sulfuric acid mist, the permittee shall verify emission rates from EU70-COKERHTR-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. For verification of PM emissions, testing shall include both the filterable and condensable fractions.[2] **(R 336.2001, R 336.2003, R 336.2004)**
   PM10 **(R 336.1205, R 336.2802, 40 CFR 52.21)**
   PM **(R 336.1205, R 336.2802, 40 CFR 52.21)**
   VOC **(R 336.1702)**
   Sulfuric acid mist[3] **(R 336.1201(3))**

4. Once during the five year term of this permit and every five years thereafter, the permittee shall verify emission rates from EU77-DHTHTR-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. For verification of PM emissions, testing shall include both the filterable and condensable fractions.[2] **(R 336.2001, R 336.2003, R 336.2004)**
   PM10 **(R 336.1205, R 336.2802, 40 CFR 52.21)**
   PM **(R 336.1205, R 336.2802, 40 CFR 52.21)**
   VOC **(R 336.1702)**
   Sulfuric acid mist[3] **(R 336.1201(3))**

5. Once during the five year term of this permit and every five years thereafter, the permittee shall verify emission rates from EU09-ALKYDIBREBHTR-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last

date of the test. For verification of PM emissions, testing shall include both the filterable and condensable fractions.[2] **(R 336.2001, R 336.2003, R 336.2004)**

PM10 **(R 336.1205, R 336.2802, 40 CFR 52.21)**
PM **(R 336.1205, R 336.2802, 40 CFR 52.21)**
PM2.5 **(R 336.1205, R 336.2903, 40 CFR Part 51, Appendix S)**
CO **(R 336.1205, R 336.2802, 40 CFR 52.21)**
Sulfuric acid mist[3] **(R 336.1201(3))**
VOC[3] **(R 336.1201(3))**

6. Once during the five year term of this permit and every five years thereafter, the permittee shall verify emission rates from EU16-NHTCHARHTR-S1, EU16-NHTSTRIPREBOIL-S1, EU19-KHTCHARHTR-S1, and EU22-FUELOILHTR-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. For tests conducted prior to commencement of trial operation of the heavy oil upgrade project, the test plan shall demonstrate that test conditions will be representative of post-startup conditions. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. For verification of PM emissions, testing shall include both the filterable and condensable fractions.[2] **(R 336.2001, R 336.2003, R 336.2004)**

NOx **(R 336.1205, R 336.2802, 40 CFR 52.21)**
PM10 **(R 336.1205, R 336.2802, 40 CFR 52.21)**
PM **(R 336.1205, R 336.2802, 40 CFR 52.21)**
CO **(R 336.1205, R 336.2802, 40 CFR 52.21)**
Sulfuric acid mist[3] **(R 336.1201(3))**

7. Within every three years of the most current stack test, and every three years thereafter, the permittee shall verify emission rates from EU16-NHTCHARHTR-S1 and EU16-NHTSTRIPREBOIL-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. For tests conducted prior to commencement of trial operation of the heavy oil upgrade project, the test plan shall demonstrate that test conditions will be representative of post-startup conditions. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[3] **(R 336.2001, R 336.2003, R 336.2004)**

NOx **(R 336.1201(3))**

8. Once during the five year term of this permit and every five years thereafter, the permittee shall verify emission rates from EU11-FCCUCHARHTR-S1, EU14-CCRPLCHARHTR-S1, and EU14-CCRPLINTHTR-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. For tests conducted prior to commencement of trial operation of the heavy oil upgrade project, the test plan shall demonstrate that test conditions will be representative of post-startup conditions. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. For verification of PM emissions, testing shall include both the filterable and condensable fractions.[2] **(R 336.2001, R 336.2003, R 336.2004)**

NOx This requirement does not apply for an emission unit listed in this condition if a NOx CEMS is installed, calibrated, maintained and operated in a satisfactory manner on that emission unit. **(R 336.1205, R 336.2802, 40 CFR 52.21)**
PM10 **(R 336.1205, R 336.2802, 40 CFR 52.21)**
PM **(R 336.1205, R 336.2802, 40 CFR 52.21)**
Sulfuric acid mist[3] **(R 336.1201(3))**

9. Within every three years of the most current stack test, and every three years thereafter, the permittee shall verify emission rates from EU11-FCCUCHARHTR-S1, EU14-CCRPLCHARHTR-S1, and EU14-CCRPLINTHTR-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. For tests conducted prior to commencement of trial operation of the heavy oil upgrade project, the test plan shall demonstrate that test conditions will be representative of post-startup conditions. The AQD must approve the

final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[3] **(R 336.2001, R 336.2003, R 336.2004)**

PM **(R 336.1201(3))**
VOC **(R 336.1201(3))**

10. Once during the five year term of this permit and every five years thereafter, the permittee shall verify emission rates from EU04-VACHTR-S1, EU05-CRUDEHTR-S1, and EU08-GOHTCHARHTR-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. For tests conducted prior to commencement of trial operation of the heavy oil upgrade project, the test plan shall demonstrate that test conditions will be representative of post-startup conditions. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. For verification of PM emissions, testing shall include both the filterable and condensable fractions.[2] **(R 336.2001, R 336.2003, R 336.2004)**

    PM10 **(R 336.1205, R 336.2802, 40 CFR 52.21)**
    PM **(R 336.1205, R 336.2802, 40 CFR 52.21)**
    Sulfuric acid mist[3] **(R 336.1201(3))**

11. Once during the five year term of this permit and annually thereafter, the permittee shall verify emission rates from EU04-VACHTR-S1 and EU05-CRUDEHTR-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. For tests conducted prior to commencement of trial operation of the heavy oil upgrade project, the test plan shall demonstrate that test conditions will be representative of post-startup conditions. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[3] **(R 336.2001, R 336.2003, R 336.2004)**

    PM **(R 336.1201(3))**
    VOC **(R 336.1201(3))**

12. Once during the five year term of this permit and every five years thereafter for VOC, and every three years thereafter for PM, the permittee shall verify emission rates from EU08-GOHTCHARHTR-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. For tests conducted prior to commencement of trial operation of the heavy oil upgrade project, the test plan shall demonstrate that test conditions will be representative of post-startup conditions. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[3] **(R 336.2001, R 336.2003, R 336.2004)**

    PM **(R 336.1201(3))**
    VOC **(R 336.1201(3))**

13. For tests required by SC V.1 through SC V.12, the following applies for valid, regularly scheduled tests, conducted during normal operations:[3] **(R 336.1201(3))**
    a. If a test indicates non-compliance with a permitted emission rate, and the test is required to be conducted on either a three or five year cycle, the frequency of such tests shall be annual for two consecutive years. Following two consecutive years of compliance, the frequency of testing shall return to the original three or five year cycle.

14. For any emission unit required to conduct an emission test in SC V.1 through V.12 for a specific pollutant every three years and every five years, the requirement to conduct an emission test every five years for that pollutant does not apply; emission testing for that pollutant is required every three years.[2] **(R 336.1201(3))**

15. Within 180 days after commencement of trial operation of EU08-GOHTCHARHTR2-S1 and every five years thereafter, the permittee shall verify emission rates from EU08-GOHTCHARHTR2-S1 of the pollutants listed below by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test

results to the AQD within 60 days following the last date of the test. For verification of PM10 and PM2.5 emissions, testing shall include both the filterable and condensable fractions. **(R 336.2001, R 336.2003, R 336.2004)**

PM10 **(R 336.1205, 40 CFR 52.21 (c) and (d))**
PM2.5 **(R 336.1205, 40 CFR 52.21 (c) and (d))**
VOC[3] **(R 336.1201(3))**
Sulfuric acid mist[3] **(R 336.1201(3))**

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor and keep records of the concentration of hydrogen sulfide (H_2S) in the refinery fuel gas burned in each heater except EU08-GOHTCHARHTR2-S1 in accordance with the Federal Standards of Performance as specified in 40 CFR Part 60, Subpart J and Ja, in a manner and with instrumentation acceptable to the Air Quality Division.[2] **(R 336.1205, R 336.1226(d), R 336.2802, 40 CFR 52.21, 40 CFR 60.105(a)(4), 40 CFR 60.107a(a)(2))**

~~1.~~2. The permittee shall monitor and keep records of the concentration of hydrogen sulfide (H_2S) in the refinery fuel gas burned in EU08-GOHTCHARHTR2-S1 in accordance with the Federal Standards of Peformance as specified in 40 CFR 60, Subpart Ja, in a manner and with instrumentation acceptable to the Air Quality Division. **(R 336.1205, 40 CFR 60.107a(a)(2))**.

~~2.~~3. The permittee shall monitor and keep records of the concentration of total reduced sulfur (TRS) in the refinery fuel gas burned in each heater/boiler, in a manner and with instrumentation acceptable to the Air Quality Division. The TRS monitor may be used as an alternative to the H2S monitoring required by SC VI.1 and VI.2.[3] **(R 336.1201(3))**

~~3.~~4. Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H_2S or TRS in the fuel gas being burned.[2] **(40 CFR 60.105(a)(4)(ii), 40 CFR 60.107a(a)(1)(vi))**

~~4.~~5. The permittee shall keep records of emissions and operating information to comply with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A, J, and where applicable Ja.[2] **(40 CFR Part 60 Subparts A and J/Ja)**

~~5.~~6. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor and record on a continuous basis the NO_X and oxygen emissions from EU08-GOHTCHARHTR-S1. The permittee shall install and operate the Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix 3-S1 and shall use the CEMS data for determining compliance with the appropriate emission limits in SC I.7 and SC I.8.[2] **(R 336.1205(3))**

~~6.~~7. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor and record on a continuous basis the NO_X and oxygen emissions from EU14-CCRPLCHARHTR-S1 and EU14-CCRPLINTHTR-S1. The permittee shall install and operate the CEMS to meet the timelines, requirements and reporting detailed in Appendix 3-S1 and shall use the CEMS data for determining compliance with the appropriate emission limits in SC I.7 and I.8.[3] **(R 336.1201(3))**

8. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor and record on a continuous basis the NO_X and oxygen emissions from EU04-VAC2HTR-S1, EU09-ALKYDIBREBHTR-S1, EU77-DHTHTR-S1, EU70-COKERHTR-S1, EU04-VACHTR-S1, EU05-CRUDEHTR-S1. The permittee shall install and operate the CEMS to meet the timelines, requirements and reporting detailed in Appendix 3-S1.[2] **(40 CFR Part 60, Subpart Ja, Consent Order No. 01-40119)**

~~7.~~9. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor and record on a continuous basis the NOx and oxygen emissions from EU08-GOHTCHARHTR2-S1. The permittee shall install and operate the Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix 3-S1. **(40 CFR Part 60 Subpart Ja)**

10. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor and record on a continuous basis the CO and oxygen emissions from EU70-COKERHTR-S1, EU08-GOHTCHARHTR-S1, EU14-CCRPLCHARHTR-S1, EU14-CCRPLINTHTR-S1, EU11-FCCUCHARHTR-S1, EU04-VAC2HTR-S1, and EU77-DHTHTR-S1, and, in their shared stack, EU04-VACHTR-S1 and EU05-CRUDEHTR-S1. The permittee shall install and operate the CEMS in accordance with the requirements of 40 CFR 60.11, 40 CFR 60.13, and 40 CFR Part 60, Appendix A, the applicable performance specification test of 40 CFR Part 60, Appendices B and F. With respect to 40 CFR Part 60, Appendix F, in lieu of the requirements of 40 CFR Part 60 Appendix F(5.1.1, 5.1.3, and 5.1.4), the permittee shall conduct either a Relative Accuracy Audit (RAA) or a Relative Accuracy Test Audit (RATA) once every twelve (12) calendar quarters, provided that a Cylinder Gas Audit is conducted each calendar quarter. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report. **(R 336.1205, R 336.2802, 40 CFR 52.21)**

~~8.~~11. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor and record on a continuous basis the CO and oxygen emissions from EU08-GOHTCHARHTR2-S1, The permittee shall install and operate the CEMS in accordance with the requirements of 40 CFR §§60.11, 60.13, and Part 60, Appendix A, the applicable performance specification test of 40 CFR Part 60 Appendices B and F. With respect to 40 CFR Part 60 Appendix F, in lieu of the requirements of 40 CFR Part 60 Appendix F §§5.1.1, 5.1.3, and 5.1.4, the permittee shall conduct either a Relative Accuracy Audit (RAA) or a Relative Accuracy Test Audit (RATA) once every twelve (12) calendar quarters, provided that a Cylinder Gas Audit is conducted each calendar quarter. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report.[3] **(R 336.1201(3))**

~~9.~~12. The permittee shall monitor, in a satisfactory manner, the heat input for each heater in FG-HEATERS-S1, in MMBTU/hr, on a daily, monthly, and rolling 12 month time period basis.[2] **(R 336.1205(1), R 336.1225, R 336.2802, 40 CFR 52.21)**

~~10.~~13. The permittee shall keep daily records of the type and amount of fuel used in each heater/boiler in FGHEATERS-S1.[2] **(R 336.1205, R 336.1225, R 336.1901, 45 FR 29270, 40 CFR 52.21 (c) and (d))**

~~11.~~14. The permittee shall keep, in a satisfactory manner, records of NOx emissions on a monthly and a 12 month rolling basis for EU04-VACHTR-S1 and EU05-CRUDEHTR-S1 combined.[2] **(R 336.2802, 40 CFR 52.21, Consent Order No. 01-40119)**

15. The permittee shall keep, in a satisfactory manner, daily, monthly, and rolling 12 month time period records of the heat input for each heater in FG-HEATERS-S1, in MMBTU/hr.[2] **(R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21)**

16. The permittee shall keep, in a satisfactory manner, daily, monthly, and rolling 12-month time period records of the combined heat input for EU08-GOHTCHARHTR-S1 and EU08-GOHTCHARHTR2-S1, in MMBTU/hr.[3] **(R 336.1201(3))**

See Appendix 3-S1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit the data on the concentration of hydrogen sulfide or total reduced sulfur in the refinery fuel gas burned in FGHEATERS-S1 to the Air Quality Division (AQD) District Supervisor in acceptable format within 30 days following the end of the quarter in which the data were collected.[2] **(40 CFR 60.7)**

5. The permittee shall submit the data on the concentration of total reduced sulfur in the refinery fuel gas burned in EU08-GOHTCHARHTR2-S1 to the Air Quality Division (AQD) District Supervisor in an acceptable format within 30 days following the end of the quarter in which the data were collected.3 (R336.1201(3))

6. The permittee shall submit the data on the concentration of NOx in the exhaust gas from EU08-GOHTCHARHTR2-S1 to the Air Quality Division (AQD) District Supervisor in an acceptable format within 30 days following the end of the quarter in which the data were collected. **(40 CFR 60.7)**

4.7. The permittee shall submit the data on the concentration of CO in the exhaust gas from EU08-GOHTCHARHTR2-S1 to the Air Quality Division (AQD) District Supervisor in an acceptable format within 30 days following the end of the quarter in which the data were collected.[3] **(R 336.1201(3))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV04-H1-05-H1 (EU04-VACHTR-S1 and EU05-CRUDEHTR-S1)	118[1]	199[1]	R 336.1225
2. SV08-H1 (EU08-GOHTCHARHTR-S1)	63[1]	160[1]	R 336.1225
3. SV09-H7 (EU09-ALKYDIBREBHTR-S1)	76[1]	150[1]	R 336.1225
4. SV11-H1 (EU11-FCCUCHARHTR-S1)	90[1]	150[1]	R 336.1225
5. SV14-H4A (EU14-CCRPLINTHTR-S1)	66[1]	195[1]	R 336.1225
6. SV14-H6 (EU14-CCRPLCHARHTR-S1)	84[1]	195[1]	R 336.1225
7. SV16-H3 (EU16-NHTSTRIPREBOIL-S1)	45[1]	96.8[1]	R 336.1225
8. SV16-H4 (EU16-NHTCHARHTR-S1)	56[1]	91.7[1]	R 336.1225
9. SV19-H2 (EU19-KHTCHARHTR-S1)	39[1]	85.7[1]	R 336.1225
10. SV22-1-H1 (EU22-FUELOILHTR-S1) (unobstructed vertical discharge not required)	NA	29.8[1]	R 336.1225
11. SV04-H2 (EU04-VAC2HTR-S1)	96[1]	125[1]	R 336.1225
12. SV70-H1 (EU70-COKERHTR-S1)	112[1]	150[1]	R 336.1225
13. SV77-H1 (EU77-DHTHTR-S1)	60[1]	125[1]	R 336.1225
14. SV08-H2 (EU08-GOHTCHARHTR2-S1)	58.5	170	R 336.1225 40 CFR 52.21 (c) and (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provision of the federal Standards of Performance of New Stationary Sources as specified in 40 CFR Part 60, Subparts A, J, and where applicable Ja, as they apply to FGHEATERS-S1.[2] **(40 CFR Part 60, Subparts A and J/Ja)**

2. The permittee shall not operate any emission unit in FG-HEATERS-S1 unless an approved Start-up, Shutdown and Malfunction Plan (SSMP), or an alternate plan approved by the AQD District Supervisor is implemented, maintained and followed. The plan shall describe how emissions will be minimized during all startups, shutdowns, and malfunctions. The plan shall incorporate procedures recommended by the equipment manufacturer as well as standard industry practices.[2] **(R 336.1205, R 336.1911, R 336.1912, R 336.2802, 40 CFR 52.21)**

3. The permittee shall comply with all provisions of the federal National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters as specified in 40 CFR Part 63 Subparts A and DDDDD, as they apply to EU08-GOHTCHARHTR2-S1. (40 CFR 63 Subparts A & DDDDD)

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).
[3] This condition is included at the request of the permittee.

FGFLARES-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

All refinery flares. Four flares are subject to the NSR Consent Decree (USEPA Consent Order 01-40119) and subsequent revisions: EU-CRUDEFLARE-S1, EU-UNIFFLARE-S1, EU-ALKYFLARE-S1, and EU-CPFLARE-S1
Permit: 63-08E

Emission Units: EUCRUDEFLARE-S1, EUUNIFFLARE-S1, EUALKYFLARE-S1, EUCPFLARE-S1, EU-COKERFLARE-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. There shall be no visible emissions from any flare in FGFLARES-S1 except for periods not to exceed a total of five minutes during any two consecutive hours. This requirement is based on the federal Standards of Performance for New Stationary Sources, 40 CFR 60.18(c)(1).[2] **(40 CFR Part 60, Subparts A and J)**

II. MATERIAL LIMIT(S)

	Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1.	H_2S in refinery fuel gas burned[a,b]	160 ppmv on a 3 hour rolling average basis[2]	Three hour rolling average	Each flare in FGFLARES-S1	SC VI.1	**40 CFR60.103a(h)**

[a] The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this requirement. For flares equipped with flare gas recovery, the determination that a relief valve leakage or other emergency malfunction is exempt from this requirement will be based on the root cause analysis conducted in accordance with SC III.3, SC III.4, SC III.7, SC III.11, and SC III.12

[b] The permittee shall comply with this material limit and other applicable requirements of 40 CFR Part 60, Subparts A and Ja by the dates specified by USEPA Consent Decree 12-11544, as amended.

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall conduct an event-specific investigation into each flaring incident that results in sulfur dioxide emissions greater than 500 pounds from FGFLARES-S1 in any 24-hour period. The investigation shall be performed in accordance with the requirements outlined in SC III.9. The permittee may rely on prior investigation reports for events that have the same or similar root causes.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, Consent Order 01-40119)**

2. The permittee shall conduct an event-specific investigation into each flaring incident that results in sulfur dioxide or volatile organic compound emissions greater than 500 pounds from FGFLARES-S1 in any 24-hour period. The investigation shall be performed in accordance with the requirements outlined in SC III.10. The permittee may rely on prior investigation reports for events that have the same or similar root causes.[3] **(R336.1201(3))**

3. The permittee shall maintain FGFLARES-S1 in good working order and in a manner consistent with good pollution control practices for minimizing emissions including during periods of startup, shutdown, and malfunction. Good

air pollution control practice for FGFLARES-S1 shall include, at a minimum, development, implementation, and operation in accordance with an approved Sulfur Shedding Plan to minimize or prevent excess sulfur dioxide emissions from the Sulfur Recovery Units, Tail Gas Treating Units ("TGTUs"), and associated amine system. The Sulfur Shedding Plan shall have as a goal the elimination of flaring incidents in excess of 500 pounds of sulfur dioxide in any 24-hour period through the following.[2] **(R 336.1205, 40 CFR 60.11(d), Consent Order 01-40119)**

a. Define maintenance and operation practices for the new Sulfur Recovery Plants, the Tail Gas Treating Units ("TGTUs"), and amine system, and associated equipment in conjunction with this project. The plan should also evaluate and address any upstream process unit that has a direct impact on the operation and maintenance of the new Sulfur Recovery Plants, TGTUs, and Amine Systems.
b. Define good air pollution control practices to minimize the duration and amount of excess sulfur dioxide emissions from flaring events associated with the Sulfur Recovery Plants, TGTUs, and Amine Systems. The good pollution control practices shall include but not be limited to procedures to reduce excess sulfur dioxide emissions from a flaring incident through rate reduction or even shutdown of applicable process units associated with the flaring event. These practices should also entail operating measures and procedures to divert material being flared to other Sulfur Recovery Plants at the refinery.
c. Define measures to ensure continuous operation of the Sulfur Recovery Plants and Amine Systems between scheduled maintenance turnarounds. The measures shall include, but not be limited to, sulfur shedding procedures, adequate equipment redundancy, new startup and shutdown procedures, emergency procedures and schedules to coordinate maintenance turnarounds of the Sulfur Recovery Plants, TGTUs, and any supplemental control device to coincide with scheduled turnarounds of major upstream process units.

4. The permittee shall review and revise the Sulfur Shedding Plan on at least an annual basis to ensure it remains accurate.[2] **(40 CFR 60.11(d), U.S. EPA Consent Order 01-40119)**

5. The permittee shall conduct an event-specific investigation into each event that resulted in flaring more than 500,000 standard cubic feet of material in FGFLARES-S1 in any 24-hour period. The permitted pilot and sweep gas routed to the flares shall be excluded from the 500,000 standard cubic feet threshold. The investigation shall be performed in accordance with the requirements outlined in Special Condition III.9. The permittee may rely on prior investigation reports for events that have the same or similar root causes.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

6. The permittee shall establish a tracking system for flaring incidents that result in emissions greater than 100 pounds but fewer than 500 pounds of VOC from FGFLARES-S1 in any 24-hour period. The permittee will take action to minimize the likelihood of recurrence of such incidents. After 28 instances of flaring events between 100 and 499 pounds of VOC within a consecutive twelve month period, permittee shall conduct an event-specific investigation into all such instances for the next six month period, at which point a new 12-month period for purposes of counting instances shall begin.[3] **(R 336.1201(3))**

7. The permittee shall prepare and follow a Flare Waste Gas Minimization Plan for FGFLARES-S1. The plan shall be designed and implemented to reduce or eliminate flaring events and shall include, at a minimum, the following elements.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**
   a. A description and technical information for each flare that includes:
      i. Detailed process flow diagram accurately depicting all pipelines, process units, flare gas recovery systems, surge drums and knock-out pots, compressors and other equipment that vent to each flare. At a minimum, this shall include full and accurate as built dimensions and design capacities of the flare gas recovery systems, compressors, surge drums and knock-out pots.
      ii. Description of equipment, processes and procedures installed or implemented within the last five years to reduce flaring. The description shall specify the year of installation.
      iii. Description of any equipment, processes, or procedures the owner or operator plans to install or implement to eliminate or reduce flaring. The description shall specify the scheduled year of installation or implementation.
      iv. Description and evaluation of prevention measures to address the following:
         1. Flaring that has occurred or reasonably may be expected to occur during planned major maintenance activities, including startup and shutdown. The evaluation shall include a review of flaring that has

occurred during these activities in the past five years and shall consider the feasibility of performing these activities without flaring.

2. Flaring that may reasonably be expected to occur due to issues of gas quantity and quality. The evaluation shall include an audit of the storage capacity available for excess vent gases, the scrubbing capacity available for vent gases including any limitations associated with scrubbing the vent gases for use as a fuel, and shall consider the feasibility of reducing flaring through the recovery, treatment, and use of the gas or other means.
3. Flaring caused by the recent failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. The evaluation shall consider the adequacy of existing maintenance schedules and protocols for such equipment. For purposes of this section, a failure is recurrent if it occurs more than twice in any five year period as a result of the same causes as identified in the event-specific investigations.

b. A program of corrective action for malfunctioning process, air pollution control, and monitoring equipment related to the performance of FGFLARES-S1.
c. Procedures for conducting event-specific investigations as required by SC III.1 and SC III.5.
d. A determination of the appropriate steam to hydrocarbon ratio for each material for each flare, the basis for the ratios, and methods for estimating emissions from each flare, including when the steam to hydrocarbon ratios are not maintained at the appropriate level.

8. The permittee shall review and revise the Flare Waste Gas Minimization Plan on at least an annual basis to ensure it remains current and complies with the provisions outlined in SC III.7[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

9. At a minimum, the permittee shall include all of the following specific information in the event-specific investigations for the reportable flaring events (i.e. greater than 500 pounds SO2 or 500,000 scf of gas).[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, Consent Order 01-40119)**
   a. The date and time that the flaring event started and ended.
   b. The total quantity of gas flared during each event.
   c. An estimate of the quantity of sulfur dioxide and VOC that was emitted and the calculations used to determine the quantities.
   d. The steps taken to limit the duration of the flaring event or the quantity of emissions associated with the event.
   e. A detailed analysis that sets forth the root cause and all significant contributing causes of the flaring event to the extent determinable.
   f. An analysis of the measures, if any, available to reduce the likelihood of a recurrence of a flaring event resulting from the same root cause or significant contributing causes in the future.
   g. A demonstration that the actions taken during the flaring event are consistent with the procedures specified in the Flare Waste Gas Minimization and Sulfur Shedding plans, as appropriate. If the actions taken during the flaring event are not consistent with the procedures specified in the appropriate plan, then the permittee must record the actions taken for that event and identify the reasons why the plan was not followed.
   h. For any flaring event that lasts longer than 24 hours, each calendar day shall constitute a separate event.

10. At a minimum, the permittee shall include all of the following specific information in the event-specific investigations for the reportable flaring events (i.e. greater than 500 pounds SO_2 or VOC, or more than 500,000 scf of gas)[3] **(R 336.1201(3))**
    a. The date and time that the flaring event started and ended.
    b. The total quantity of gas flared during each event.
    c. An estimate of the quantity of sulfur dioxide and VOC that was emitted and the calculations used to determine the quantities.
    d. The steps taken to limit the duration of the flaring event or the quantity of emissions associated with the event.
    e. A detailed analysis that sets forth the root cause and all significant contributing causes of the flaring event to the extent determinable.
    f. An analysis of the measures, if any, available to reduce the likelihood of a recurrence of a flaring event resulting from the same root cause or significant contributing causes in the future.

g. A demonstration that the actions taken during the flaring event are consistent with the procedures specified in the Flare Waste Gas Minimization and Sulfur Shedding plans, as appropriate. If the actions taken during the flaring event are not consistent with the procedures specified in the appropriate plan, then the permittee must record the actions taken for that event and identify the reasons why the plan was not followed.
h. For any flaring event that lasts longer than 24 hours, each calendar day shall constitute a separate event.

11. The permittee shall complete each event-specific investigation report within 45 calendar days after the reportable flaring incident.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, Consent Order 01-40119)**

12. The permittee shall operate each flare in FGFLARES-S1 in a satisfactory manner at all times that emissions may be vented to it, including maintaining an adequate steam to hydrocarbon ratio in each flare and a minimum heat content of 300 BTU/scf in the vent gas to each flare.[2] **(R 336.1910, 40 CFR 60.18)**

13. The permittee shall comply with the following requirements for corrective action procedures as they relate to reportable flaring events (events resulting in sulfur dioxide emissions greater than 500 pounds in any 24-hour period) 40 CFR 60.11d[2]: **(R 336.1910, 40 CFR Part 60, Subpart A)**
    a. The permittee shall take reasonable steps to correct conditions that have caused or contributed to such events, and to minimize such incidents. The permittee shall evaluate whether reportable flaring events are due to malfunctions.
    b. In response to any reportable flaring events, 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 reportable flaring event.
    c. 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, as specified under 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.[3]

14. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and CC, as they apply to FGFLARES-S1.[2] **(R 336.1702, 40 CFR Part 63, Subparts A and CC)**

15. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and J, as they apply to FGFLARES-S1.[2] **(R 336.1702, 40 CFR Part 60, Subparts A and J/Ja)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall maintain the ignition sensor and/or pilot flame for FGFLARES-S1.[2] **(40 CFR Part 60, Subpart A)**

2. The permittee shall equip and maintain each flare in FGFLARES-S1 with a pilot flame.[2] **(R 336.1910, 40 CFR Part 60 Subpart A, 40 CFR 63.11(b)(5))**

3. Each flare in FGFLARES-S1 shall be designed and installed so that it complies with the requirements of 40 CFR Part 60, Subpart A.[2] **(R 336.1910, 40 CFR 60.18(c))**

~~3.~~4. The permittee shall install a flare gas recovery system upstream of EU-UNIFFLARE-S1 to recover and route flare gas to the refinery fuel gas treatment system. The installation shall be completed by June 30, 2016.[3] (R 336.1201(3))

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

Footnotes:
[3] This condition is included at the request of the permittee.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor and keep records of the concentration of hydrogen sulfide in the refinery fuel gas burned in FGFLARES-S1 in accordance with the Federal Standards of Performance as specified in 40 CFR Part 60, Subpart J and where applicable Ja, in a manner and with instrumentation acceptable to the Division. Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H_2S in the fuel gas being burned.[2] **(40 CFR 60.105(a)(4), 40 CFR 60.107a(a)(2))**

2. The permittee shall keep records of emissions and operating information for each flare in FGFLARES-S1 to comply with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and J.[2] **(40 CFR Part 60, Subparts A and J)**

3. The permittee shall monitor emissions and operating and maintenance information for each flare in FGFLARES-S1 in accordance with the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and CC.[2] **(40 CFR Part 63, Subparts A and CC)**

4. The permittee shall keep records of emission information and operating and maintenance information for each flare in FGFLARES-S1 to comply with the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and CC. The permittee shall keep all source emissions and operating and maintenance information on file at the facility for a period of at least five years and make them available to the Department upon request.[2] **(40 CFR Part 63, Subparts A and CC)**

5. The permittee shall track and ensure timely closure of the corrective actions, if any, identified to minimize the likelihood of a recurrence of the reportable flaring events. The permittee shall report every six months on the status of the yet-to-be-completed corrective actions related to the reportable flaring incidents.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, Consent Order 01-40119)**

6. The permittee shall keep, in a satisfactory manner, a record of the current and prior versions of the Sulfur Shedding Plan and the Flare Waste Gas Minimization Plan for FGFLARES-S1, as required by SC III.6 and SC III.10. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, Consent Order 01-40119)**

7. The permittee shall monitor all flares for visible emissions using color video monitors with date and time stamp.[2] **(R 336.1205)**

8. The permittee shall install, maintain, and continuously operate, for EG-CRUDEFLARE, EG-UNIFFLARE, EG-ALKYFLARE, and EG-CPFLARE, continuous flow measuring devices to continuously monitor and record the flow of gas to each of these flares. The flow measuring devices shall be sensitive to rapid flow changes, and have the capability of reporting both instantaneous velocity and totalized flow. Materials exposed to the flare gas shall be corrosion resistant. The flow measuring devices shall (i) feature automated daily calibrations at low and high ranges, and (ii) shall signal alarms if the calibration error or drift is exceeded, provided that the monitor is equipped with such capability. The volumetric flow measuring devices may consist of one or more flow meters, and, as combined, shall meet the following specifications.[2] **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**
   a. Velocity Range: 0.1-250 ft/sec.
   b. Repeatability: ± 1% of reading over the velocity range.
   c. Accuracy: ± 20% of reading over the velocity range of 0.1-1 ft/s and ± 5% of reading over the velocity range of 1-250 ft/s.
   d. Installation: Applicable AGA, ANSI, API, or equivalent standard.
   e. Flow Rate Determination: Must be corrected to one atmosphere pressure and 68 °F and recorded as one-minute averages.
   f. Data Records: Measured continuously and recorded over one minute averages. The instrument shall be capable of storing or transferring all data for later retrieval.
   g. QA/QC: An annual verification of accuracy is required, and shall be specified by the manufacturer.

9. The permittee shall install, maintain, and continuously operate devices to continuously monitor and record the flow of steam to each flare in FGFLARES-S1, the VOC composition of the vent gas stream to each flare, and the steam to hydrocarbon ratio in each flare. The monitoring devices shall meet the following specifications.[2] **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**
   a. Turndown Ratio: 25:1.
   b. Repeatability: ± 1% of reading over the range of the instrument.
   c. Accuracy: ± 1% from 100% to 15 % of span, ± 2% from 15 % of span to 6 % of span, ± 3% from 6 % of span to 4% of span.
   d. Installation: Applicable AGA, ANSI, API, or equivalent standard.
   e. Flow Rate Determination: Must be corrected to one atmosphere pressure and 68 °F and recorded as one-minute averages.
   f. Data Records: Measured continuously and recorded over one minute averages. The data acquisition system shall be capable of storing and transferring all data for later retrieval.
   g. QA/QC: An annual verification of accuracy is required, and shall be specified by the manufacturer.

10. All data as generated by the flare and steam flow measuring devices shall be continuously recorded. The recording system(s) must have the capability to generate one-minute average data from that which is continuously generated by the flow measuring devices.[2] **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**

11. The permittee shall maintain the flare and steam flow measuring devices and steam to hydrocarbon control system in good operating condition at all times when the flare that it serves is operational, except when out of service due to:
   a. Breakdowns and unplanned system maintenance of each monitoring device shall not exceed 96 hours, cumulatively, per quarter for each reporting period; or,
   b. Planned maintenance, which shall not exceed 14 days per 18 month period, provided that a written notification detailing the reason for maintenance and methods that will be used during the maintenance period to determine emissions associated with flare events is provided to the AQD District Supervisor prior to, or within 24 hours of, removal of the monitoring system from service.[2] **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**

12. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the TRS concentration in the vent gas to each flare in FGFLARES-S1 on a continuous basis.[2] **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**

13. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a gas chromatography system to monitor and record the total hydrocarbon, methane, and TRS concentration in the vent gas to each flare in FGFLARES-S1 on a continuous basis.[3] **(R 336.1201(3))**
   a. The gas chromatography system shall be maintained to be accurate within 5% of full scale.
   b. The minimum sampling frequency shall be one sample every 30 minutes.

14. The permittee shall calculate and keep records of the annual emissions of PM, PM10, NO_x, VOC, CO, SO_2, sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), and Total Reduced Sulfur (TRS) from the Detroit heavy oil upgrade project (Detroit HOUP), in tons per year on a calendar year basis. Records shall be kept in the format described in Appendix 4F-S1, or an alternate format acceptable to the AQD Permit Section Supervisor. Calculations and record keeping shall begin the month in which the Detroit HOUP begins normal operations and shall continue for 10 years.[2] **(R 336.2818, 40 CFR 52.21(r)(6)(iii), 40 CFR Part 51, Appendix S)**

15. The permittee shall calculate, keep records of, and annually report to the AQD, the annual emissions of PM, PM10, NO_x, VOC, CO, SO_2, sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), and Total Reduced Sulfur (TRS) from the Detroit heavy oil upgrade project (Detroit HOUP), in tons per year on a calendar year basis. Calculations shall be based on the best available and representative data. Supporting documentation shall be submitted with the emissions report, and shall be generally consistent with the format and specificity of Exhibit 7 of the Sierra Club Agreement. Records shall be kept in the format described in Appendix 4F-S1, or an alternate format

acceptable to the AQD Permit Section Supervisor. Calculations and record keeping shall begin the month in which the Detroit HOUP begins normal operations and shall continue for 10 years.[2] **(R 336.1201(3))**

See Appendices 3-S1 and 4-S1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit the data on the concentration of hydrogen sulfide in the refinery fuel gas burned in FGFLARES-S1 to the AQD District Supervisor in acceptable format within 30 days following the end of the quarter in which the data were collected.[2] **(R 336.1201(3), 40 CFR 60.7)**

5. The permittee shall submit a semiannual summary of reportable flaring incidents to the AQD District Supervisor. Each report shall include, as a minimum, the number of reportable flaring incidents that occurred during the period, the amount of excess emissions during each reportable flaring incident, and the status of all yet-to-be-completed corrective actions from reportable flaring incidents. The permittee shall submit each report in an acceptable format within 30 days following the end of the semiannual period that the report covers.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, Consent Order 01-40119)**

6. The permittee shall submit a copy of the Sulfur Shedding and Waste Gas Minimization Plans to the AQD District Supervisor for review at least 60 days before commencing operation of equipment associated with the heavy oil upgrade project. [2] **(R 336.1205, R 336.2802, 40 CFR 52.21, Consent Order 01-40119)**

7. The permittee shall submit to the AQD District Supervisor an operation and maintenance (O&M) plan and a Waste Gas Minimization Plan for each flare in FGFLARES-S1 at least 120 days before commencing operation of EU70-COKER. At a minimum the O&M plan shall include an inspection schedule and description of inspection procedures for the flare components, including the flare tips and pilots. [2] **(40 CFR Part 63, Subparts A and CC)**

8. The permittee shall submit a report to the AQD Permit Section Supervisor within 60 days following the end of each reporting year if both the following occur for any of these pollutants:
   a. The calendar year actual emission from the Detroit HOUP exceed the baseline actual emissions (BAE) by a significant amount, and
   b. The calendar year actual emissions from the Detroit HOUP differ from the pre-construction projection for the emission units included in the Hybrid Applicability Test used for the Detroit HOUP. The pre-construction projection is the sum of the projected actual emissions from each emission unit using the actual-to-projected actual emissions test as part of the Hybrid Applicability Test, and the potential emissions from each emission unit using the potential-to-emit test as part of the Hybrid Applicability Test.

   The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to this special condition, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projection).[2] **(R 336.1201(3), R 336.2818, 40 CFR 52.21(r)(6)(v))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and Subpart CC, as they apply to FGFLARES-S1.[2] **(40 CFR Part 63, Subparts A and CC)**

2. The permittee shall comply with all provision of the federal Standards of Performance of New Stationary Sources as specified in 40 CFR Part 60, Subparts A, J, and where applicable Ja, as they apply to FGFLARES-S1.[2] **(40 CFR Part 60 Subparts A and J/Ja)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).
[3]This condition is included at the request of the permittee.

FGPROCVENTS-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Miscellaneous process vents subject to Refinery MACT 1 (40 CFR Part 63, Subpart CC). Permit: 63-08E

Emission Units: EU14-VENT14SUMP-S1, EU21-VENT21XF-S1, EU14-VENT14XH-S1, EU21-VENT21V47-S1, EU21-S2OFFGAS-S1, EU09-VENT9V50-S1

POLLUTION CONTROL EQUIPMENT

Flare, FCCU Charge Heater

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and Subpart CC, as they apply to FGPROCVENTS-S1. **(40 CFR Part 63, Subparts A and CC)**

2. The permittee for a Group 1 miscellaneous process vent as defined in 40 CFR 63.641 shall comply with the requirements of either paragraphs (a) or (b) as follows: **(40 CFR 63.643(a))**
   a. The permittee shall reduce emissions of organic HAPs using a flare that meets the requirements of 40 CFR 63.11(b). Flares shall be operated at all times when emissions may be vented to them. **(40 CFR 63.643(a)(1))**
   b. The permittee shall reduce emissions of organic HAPs, using a control device, by 98% or to a concentration of 20 ppm by volume, on a dry basis, corrected to 3% oxygen, whichever is less stringent. Compliance can be determined by measuring either organic HAPs or TOCs using the procedures in 40 CFR 63.645. **(40 CFR 63.643(a)(2))**

3. If a boiler or process heater is used to comply with the percentage of reduction requirement or concentration limit specified in paragraph 40 CFR 63.643(a)(2), then the vent stream shall be introduced into the flame zone of such a device, or in a location such that the required percent reduction or concentration is achieved. Testing and monitoring is required only as specified in 40 CFR 63.644(a) and 63.645. **(40 CFR 63.643(b))**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGGROUP2-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

40 CFR 63 Subpart CC Group 2 Storage Tanks. Permit: 63-08E

Emission Units: EUTANK11-S1, EUTANK16-S1, EUTANK17-S1, EUTANK18-S1, EUTANK24-S1, EUTANK27-S1, EUTANK28-S1, EUTANK30-S1, EUTANK31-S1, EUTANK50-S1, EUTANK52-S1, EUTANK54-S1, EUTANK56-S1, EUTANK59-S1, EUTANK60-S1, EUTANK62-S1, EUTANK63-S1, EUTANK64-S1, EUTANK70-S1, EUTANK71-S1, EUTANK100-S1, EUTANK102-S1, EUTANK103-S1, EUTANK104-S1, EUTANK105-S1, EUTANK106-S1, EUTANK107-S1, EUTANK120-S1, EUTANK125-S1, EUTANK126-S1, EUTANK127-S1, EUTANK128-S1, EUTANK314-S1, EUTANK315-S1, EUTANK316-S1, EUTANK317-S1, EUTANK318-S1, EUTANK319-S1, EUTANK320-S1, EUTANK324-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Sour kerosene	8400 barrels/day[2]	Based upon a monthly average	FGGROUP2-S1	SC VI.2	**R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21**
2. Sweet kerosene	8400 barrels/day[2]	Based upon a monthly average	FGGROUP2-S1	SC VI.2	**R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21**
3. Sour distillates	44,400 barrels/day[2]	Based upon a monthly average	FGGROUP2-S1	SC VI.2	**R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21**
4. Sweet distillates	44,400 barrels/day[2]	Based upon a monthly average	FGGROUP2-S1	SC VI.2	**R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21**
5. Sour gasoil	46,800 barrels/day[2]	Based upon a monthly average	FGGROUP2-S1	SC VI.2	**R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21**
6. Sweet gasoil	46,800 barrels/day[2]	Based upon a monthly average	FGGROUP2-S1	SC VI.2	**R 336.1205, R 336.1225, R 336.2802, 40 CFR 52.21**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee for each Group 1 or Group 2 storage vessel shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 or Group 2 status and is in operation. **(40 CFR 63.123(a), 40 CFR 63.655(i))**

2. For each material stored in FGGROUP2-S1, the permittee shall keep monthly throughput records for FGGROUP2–S1. **(R 336.1702(a), 40 CFR 52.21(b)(3))**

3. The permittee shall keep records as described in paragraph 40 CFR 63.655(i). **(40 CFR 63.655(e))**

4. The permittee shall keep the records specified in 40 CFR 63.123 except as specified in paragraphs 40 CFR 63.655(i)(1)(i thru iv). **(40 CFR 63.655(i)**

5. The permittee shall keep a record that each inspection required by 40 CFR 63.120(a) was performed. **(40 CFR 63.123(c), 40 CFR 63.655(i))**

6. The permittee who elects to utilize an extension in emptying a storage vessel in accordance with 40 CFR 63.120(a)(4), 40 CFR 63.120(b)(7)(ii), or 40 CFR 63.120(b)(8) shall keep in a readily accessible location, the documentation specified in 40 CFR 63.120(a)(4), 40 CFR 63.120(b)(7)(ii), or 40 CFR 63.120(b)(8), as applicable. **(40 CFR 63.123(g), 40 CFR 63.655(i))**

7. The permittee who uses the by-pass provisions of 40 CFR 63.119(f)(3) shall keep in a readily accessible location the records specified in paragraphs 40 CFR 63.123(h)(1 thru 3) of this section. **(40 CFR 63.123(h))**
   a. The reason it was necessary to by-pass the process equipment or fuel gas system; **(40 CFR 63.123(h)(1))**
   b. The duration of the period when the process equipment or fuel gas system was by passed; **(40 CFR 63.123(h)(2))**
   c. Documentation or certification of compliance with the applicable provisions of 40 CFR 63.119(f)(3)(i thru iii). **(40 CFR 63.123(h)(3))**

8. The permittee shall retain records of any data, assumptions, and procedures used to make the determination that a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4% for existing sources or 2% for new sources. **(40 CFR 63.655(i)(1)(iv))**

9. The permittee, if required to report the results of performance tests under paragraphs 40 CFR 63.655(f) and 40 CFR 63.655(g)(7) shall retain a record of all reported results as well as a complete test report, as described in paragraph 40 CFR 63.655(f)(2)(ii) for each emission point tested. **(40 CFR 63.655(i)(2))**

10. The permittee shall retain all other information required to be reported under paragraphs 40 CFR 63.655(a thru h) for 5 years. **(40 CFR 63.655(i)(4))**

11. The permittee shall keep records describing the results of each seal gap measurement made in accordance with 40 CFR 63.120(b). The record shall include the date of the measurement, the raw data obtained in the measurement and the calculations described in 40 CFR 63.120(b)(3 and 4). **(40 CFR 63.123(d), 40 CFR 63.655(i))**

12. The permittee shall record the temperature of the stored product on a daily basis (alternative to true vapor pressure).[2] **(40 CFR 60.113)**

See Appendices 4-S1 and 7-S1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and Subpart CC, as they apply to FGGROUP2-S1.[2] **(40 CFR Part 63, Subparts A and CC)**

2. The permittee shall identify each storage tank subject to 40 CFR Part 63, Subpart CC requirements.[2] **(40 CFR 63.655(f)(1)(i)(A), 40 CFR 63.640)**

3. The permittee shall comply with all applicable requirements of 40 CFR 63.640(l) for Group 2 tanks that are converted to Group 1 tanks.[2] **(40 CFR 63.640(l))**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGIFRTANKS-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Internal floating roof tanks (IFR) that are subject to 40 CFR Part 63, Subpart CC as Group 1 Vessels or subject to 40 CFR Part 60, Subpart Kb. These tanks also may be subject to Michigan Air Pollution Control Rule 604 (R336.1604). This represents a consolidated requirement for internal floating roof tanks. Permit: 63-08E

Emission Units: EUTANK19-S1, EUTANK23-S1, EUTANK40-S1, EUTANK45-S1, EUTANK46-S1, EUTANK47-S1, EUTANK48-S1, EUTANK49-S1 EUTANK51-S1, EUTANK52-S1, EUTANK53-S1, EUTANK55-S1, EUTANK57-S1, EUTANK58-S1, EUTANK61-S1, EUTANK72-S1, , EUTANK101-S1, EUTANK104-S1, EUTANK116-S1, , EUTANK120-S1, EUETHTANK-S1, EUTANK507-S1, EUTANK508-S1, EUTANK216-S1, EUTANK29T79-S1, EUTANK22T118-S1

POLLUTION CONTROL EQUIPMENT

Internal Floating Roof

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	Maximum True Vapor Pressure of 11.0 psia[2]	Based upon Monthly average	FGIFRTANKS-S1	SC VI.1, SC VI.2	**R 336.1225, R 336.1702**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

Requirements SC III.1 thru SC III.3 apply to EUTANK19-S1, EUTANK23-S1, EUTANK40-S1, EUTANK49-S1, EUTANK51-S1, EUTANK53-S1, EUTANK57-S1, EUTANK29T79-S1, EUTANK101-S1, EUTANK104-S1, EUTANK116-S1, EUTANK22T118-S1, EUTANK120-S1, EUETHTANK-S1, EUTANK508-S1, and EUTANK216-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(b), R 336.2802, 40 CFR 52.21, 40 CFR 60.112(b)(a)(1), 40 CFR 60.113(b)(a), 40 CFR Part 60, Subparts A and Kb)**
Requirements SC III.1 thru SC III.3 apply to EUTANK45-S1, EUTANK46-S1, EUTANK47-S1, EUTANK48-S1, EUTANK55-S1, EUTANK58-S1, EUTANK61-S1, EUTANK72-S1, and EUTANK507-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2802, 40 CFR 52.21)**

1. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.[2]

2. Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.[2]

3. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all

times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.[2]

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall comply with the applicable requirements of 40 CFR 60.113b (Testing and Procedures), except as provided for in Refinery MACT 1 for EUTANK19-S1, EUTANK23-S1, EUTANK40-S1, EUTANK49-S1, EUTANK51-S1, EUTANK53-S1, EUTANK57-S1, EUTANK29T79-S1, EUTANK101-S1, EUTANK104-S1, EUTANK116-S1, EUTANK22T118-S1, EUTANK120-S1, EUETHTANK-S1, EUTANK508-S1, and EUTANK216-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(b)), R 336.2802, 40 CFR 52.21, 40 CFR 60.113b, 40 CFR Part 63, Subpart CC)**

2. The permittee shall comply with the requirements of 40 CFR 60.113b (Testing and Procedures) that apply to tanks with internal floating roofs, except as provided for in Refinery MACT 1, for EUTANK45-S1, EUTANK46-S1, EUTANK47-S1, EUTANK48-S1, EUTANK55-S1, EUTANK58-S1, EUTANK61-S1, EUTANK72-S1, and EUTANK507-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2802, 40 CFR 52.21)**

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep records as described in paragraph 40 CFR 63.655(i).[2] **(40 CFR 63.655(e))**

2. The permittee shall keep the records specified in 40 CFR 63.123 except as specified in paragraphs 40 CFR 63.655(i)(1)(i thru iv).[2]

3. The permittee for each Group 1 or Group 2 storage vessel shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 or Group 2 status and is in operation.[2] **(40 CFR 63.123(a), 40 CFR 63.655(i))**

4. The permittee shall keep a record that each inspection required by 40 CFR 63.120(a) was performed.[2] **(40 CFR 63.123(c), 40 CFR 63.655(i))**

5. The permittee who elects to utilize an extension in emptying a storage vessel in accordance with 40 CFR 63.120(a)(4), 40 CFR 63.120(b)(7)(ii), or 40 CFR 63.120(b)(8) shall keep in a readily accessible location, the documentation specified in 40 CFR 63.120(a)(4), 40 CFR 63.120(b)(7)(ii), or 40 CFR 63.120(b)(8), as applicable.[2] **(40 CFR 63.123(g), 40 CFR 63.655(i))**

6. The permittee who uses the by-pass provisions of 40 CFR 63.119(f)(3) shall keep in a readily accessible location the records specified in paragraphs 40 CFR 63.123(h)(1 thru 3) of this section.[2] **(40 CFR 63.123(h))**
   a. The reason it was necessary to by-pass the process equipment or fuel gas system. **(40 CFR 63.123(h)(1))**
   b. The duration of the period when the process equipment or fuel gas system was bypassed; **(40 CFR 63.123(h)(2))**
   c. Documentation or certification of compliance with the applicable provisions of 40 CFR 63.119(f)(3)(i thru iii). **(40 CFR 63.123(h)(3))**

7. The permittee shall retain records of any data, assumptions, and procedures used to make the determination that a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4% for existing sources or 2% for new sources.[2] **(40 CFR 63.655(i)(1)(iv))**

8. The permittee, if required to report the results of performance tests under paragraphs 40 CFR 63.655(f) and 40 CFR 63.655(g)(7) shall retain a record of all reported results as well as a complete test report, as described in paragraph 40 CFR 63.655(f)(2)(ii) for each emission point tested.[2] **(40 CFR 63.655(i)(2))**

9. The permittee shall retain all other information required to be reported under paragraphs 40 CFR 63.655(a thru h) for 5 years.[2] **(40 CFR 63.655(i)(4))**

10. The permittee shall keep records describing the results of each seal gap measurement made in accordance with 40 CFR 63.120(b). The record shall include the date of the measurement, the raw data obtained in the measurement and the calculations described in 40 CFR 63.120(b)(3 and 4).[2] **(40 CFR 63.123(d), 40 CFR 63.655(i))**

11. The permittee of each storage vessel as specified in 40 CFR 60.112b(a) shall keep records as required by paragraphs 40 CFR 60.115b(a, b or c) .depending upon the control equipment installed to meet the requirements of 40 CFR 60.112b.[2] **(40 CFR 60.115b)**

12. The permittee shall keep copies of all reports and records required by 40 CFR 60.115b, except for the record required by 40 CFR 60.115b(c)(1), for at least 5 years. The record required by 40 CFR 60.115b(c)(1) will be kept for the life of the control equipment.[2] **(R 336.1213(3)(b)(ii), 40 CFR 60.115b)**

13. After installing control equipment in accordance with 40 CFR 60.112b(a)(1) (fixed roof and internal floating roof), the permittee shall meet the following requirements: (40 CFR 60.115b(a))
    a. Keep a record of each inspection performed as required by 40 CFR 60.113b(a)(1 thru 4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). **(40 CFR 60.115b(a)(2))**

14. The permittee for each storage vessel as specified in 40 CFR 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. **(40 CFR 60.116b(b))**

15. Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below: **(40 CFR 60.116b(e))**
    a. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. **(40 CFR 60.116b(e)(1))**
    b. For crude oil or refined petroleum products the vapor pressure may be obtained by the following: **(40 CFR 60.116b(e)(1)(2))**
        i. Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference-see 40 CFR 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). **(40 CFR 60.116b(e)(2)(i))**
        ii. The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa. **(40 CFR 60.116b(e)(2)(ii))**
    c. For other liquids, the vapor pressure: **(40 CFR 60.116b(e)(3))**
        i. May be obtained from standard reference texts, or

ii. Determined by ASTM Method D2879-83 (incorporated by reference see 40 CFR 60.17); or
iii. Measured by an appropriate method approved by the Administrator; or
iv. Calculated by an appropriate method approved by the Administrator. **(40 CFR 60.116b(e)(3)(i-iv))**

16. The permittee for each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements. **(40 CFR 60.116b(f))**
    a. Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph 40 CFR 60.116b(e). **(40 CFR 60.116b(f)(1))**
    b. For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in 40 CFR 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods: **(40 CFR 60.116b(f)(2)(i-iii))**
        i. ASTM Method D2879-83 (incorporated by reference see 40 CFR 60.17); or
        ii. ASTM Method D323-82 (incorporated by reference see 40 CFR 60.17); or
        iii. As measured by an appropriate method as approved by the Administrator.

17. The permittee shall comply with the applicable requirements of 40 CFR 60.116b (Monitoring of Operations) for EUTANK19-S1, EUTANK23-S1, EUTANK40-S1, EUTANK49-S1, EUTANK51-S1, EUTANK53-S1, EUTANK57-S1, EUTANK29T79-S1, EUTANK101-S1, EUTANK104-S1, EUTANK116-S1, EUTANK22T118-S1, EUTANK120-S1, EUETHTANK-S1, EUTANK508-S1, and EUTANK216-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(b), R 336.2802, 40 CFR 52.21, 40 CFR 60.116b)**

18. The permittee shall comply with the applicable requirements of 40 CFR 60.116b (Monitoring of Operations) for EUTANK45-S1, EUTANK46-S1, EUTANK47-S1, EUTANK48-S1, EUTANK55-S1, EUTANK58-S1, EUTANK61-S1, EUTANK72-S1, and EUTANK507-S1. For purposes of this requirement, the term "applicable requirements of 40 CFR 60.116b (Monitoring of Operations)" refers to those requirements that would apply to these tanks if the tanks were actually subject to 40 CFR Part 60, Subpart Kb.[2] **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2802, 40 CFR 52.21)**

See Appendices 4-S1 and 7-S1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. Except as provided in paragraph 40 CFR 60.116b(g) the permittee for each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. **(40 CFR 60.116b(d))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

Requirements SC IX.1 thru SC IX.13 apply to EUTANK19-S1, EUTANK23-S1, EUTANK40-S1, EUTANK49-S1, EUTANK51-S1, EUTANK53-S1, EUTANK57-S1, EUTANK29T79-S1, EUTANK101-S1, EUTANK104-S1, EUTANK116-S1, EUTANK22T118-S1, EUTANK120-S1, EUETHTANK-S1, EUTANK508-S1, and EUTANK216-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(b), R 336.2802, 40 CFR 52.21, 40 CFR 60.112b)**

Requirements SC IX.1 thru SC IX.13 apply to EUTANK45-S1, EUTANK46-S1, EUTANK47-S1, EUTANK48-S1, EUTANK55-S1, EUTANK58-S1, EUTANK61-S1, EUTANK72-S1 and EUTANK507-S1. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2802, 40 CFR 52.21)**

1. Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:[2]
   a. A foam or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.
   b. Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.
   c. A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.[2]

2. Each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.[2]

3. Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.[2]

4. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90% of the opening.[2]

5. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.[2]

6. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.[2]

7. Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.[2]

8. For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill.[2]

9. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, two 30 day extensions may be requested from the Administrator in

the inspection report required in 40 CFR 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.[2]

10. For vessels equipped with a double-seal system, the permittee must visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed, or at least every 5 years; or visually inspect the IFR and the primary and secondary seal through the manhole and roof hatches at least once every 12 months after initial fill.[2]

11. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 % open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs 40 CFR 60.113b(a)(2) and 40 CFR 60.113b(3)(ii) and at intervals no greater than 5 years in the case of vessels specified in paragraph 40 CFR 60.113b(a)(3)(i).[2]

12. Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs 40 CFR 60.113b(a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present.[2]

13. If the inspection required by paragraph 40 CFR 60.113b(a)(4) is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.[2]

Requirements SC IX.14 thru SC IX.16 apply to all tanks in FGIFRTANKS-S1.

14. The permittee shall comply with all applicable provisions of Rule 604, as they apply to FGIFRTANKS-S1.[2] **(R 336.1604)**

15. The permittee may utilize the provisions of 40 CFR 63.640(n) for storage vessels included in FGIFRTANKS-S1 (Overlap of subpart CC with other regulations for storage vessels).[2] **(40 CFR 63.640(n))**

16. The permittee shall comply with all provision of the federal Standards of Performance of New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Kb, as they apply to FGIFRTANKS-S1.[2] **(40 CFR Part 60, Subparts A and Kb)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGEFRTANKS-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This flexible group represents a consolidated requirement for external floating roof (EFR) tanks that are subject to 40 CFR Part 63, Subpart CC as Group 1 vessels or subject to 40 CFR Part 60, Subpart Kb. These tanks may also be subject to Michigan Air Pollution Control Rule 623 (R 336.1623) and/or NSPS Subpart QQQ. This consolidated requirement basically adopts NSPS Kb for these EFR tanks. Permit: 63-08E

Emission Units: EUTANK32-S1, EUTANK33-S1, EUTANK108-S1, EUTANK109-S1, EUTANK110-S1, EUTANK112-S1, EUTANK113-S1, EUTANK114-S1, EUTANK115-S1, EUTANK127-S1, EUTANK128-S1, EUTANK129-S1, EUTANK130-S1, EUTANK601-S1, EU29TANK40-S1, EU29TANK41-S1

POLLUTION CONTROL EQUIPMENT

External Floating Roof

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

Requirements SC III.1 thru SC III.3 apply to EUTANK-129-S1, EUTANK601-S1, EU29TANK40-S1, and EU29TANK41-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(b), R 336.2802, 40 CFR 52.21, 40 CFR 60.112b(a)(2))**

Requirements SC III.1 thru SC III.3 apply to EUTANK32-S1, EUTANK33-S1, EUTANK108-S1, EUTANK109-S1, EUTANK110-S1, EUTANK112-S1, EUTANK113-S1, EUTANK114-S1, EUTANK115-S1, EUTANK127-S1, EUTANK128-S1, and EUTANK130-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2802, 40 CFR 52.21)**

1. Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.[2]

2. The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in 40 CFR 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall. The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in 40 CFR 60.113(b)(4) [45-day repair requirement + two 30-day extensions].[2]

3. Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasket cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90% of the area of the opening.[2]

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall comply with the applicable requirements of 40 CFR 60.113b (Testing and Procedures), except as provided for in Refinery MACT 1, for EUTANK129-S1, EUTANK601-S1, EU29TANK40-S1, and EU29TANK41-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(b), R 336.2802, 40 CFR 52.21, 40 CFR 60.113b, 40 CFR Part 63, Subpart CC)**

2. The permittee shall comply with the applicable requirements of 40 CFR 60, Subpart Kb, section 60.113b (Testing and Procedures), except as provided for in Refinery MACT 1, for EUTANK32-S1, EUTANK33-S1, EUTANK108-S1, EUTANK109-S1, EUTANK110-S1, EUTANK112-S1, EUTANK113-S1, EUTANK114-S1, EUTANK115-S1, EUTANK127-S1, EUTANK128-S1, and EUTANK130-S1. For purposes of this requirement, the term "applicable requirements of 40 CFR 60, Subpart Kb, section 60.113b (Testing and Procedures), except as provided for in Refinery MACT 1" refers to those requirements that would apply to these tanks if the tanks were actually subject to 40 CFR Part 60, Subpart Kb.[2] **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2802, 40 CFR 52.21)**

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep records as described in paragraph 40 CFR 63.655(i). **(40 CFR 63.655(e))**

2. The permittee shall keep the records specified in 40 CFR 63.123 except as specified in paragraphs 40 CFR 63.655(i)(1)(i-iv). **(40 CFR 63.655(i))**

3. The permittee for each Group 1 or Group 2 storage vessel shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 or Group 2 status and is in operation. **(40 CFR 63.123(a), 40 CFR 63.655(i))**

4. The permittee shall keep a record that each inspection required by 40 CFR 63.120(a) was performed. **(40 CFR 63.123(c), 40 CFR 63.655(i))**

5. The permittee who elects to utilize an extension in emptying a storage vessel in accordance with 40 CFR 63.120 (a)(4), (b)(7)(ii), or (b)(8) shall keep in a readily accessible location, the documentation specified in 40 CFR 63.120 (a)(4), (b)(7)(ii), or (b)(8), as applicable. **(40 CFR 63.123(g), 40 CFR 63.655(i))**

6. The permittee who uses the by-pass provisions of 40 CFR 63.119(f)(3) shall keep in a readily accessible location the records specified in paragraphs 40 CFR 63.123(h)(1) through (h)(3) of this section. **(40 CFR 63.123(h))**
   a. The reason it was necessary to by-pass the process equipment or fuel gas system. **(40 CFR 63.123(h)(1))**
   b. The duration of the period when the process equipment or fuel gas system was bypassed; **(40 CFR 63.123(h)(2))**
   c. Documentation or certification of compliance with the applicable provisions of 40 CFR 63.119(f)(3)(i-iii). **(40 CFR 63.123(h)(3))**

7. The permittee shall retain records of any data, assumptions, and procedures used to make the determination that a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4% for existing sources or 2% for new sources. **(40 CFR 63.655(i)(1)(iv))**

8. The permittee, if required to report the results of performance tests under paragraphs 40 CFR 63.655(f) and 40 CFR 63.655(g)(7) shall retain a record of all reported results as well as a complete test report, as described in paragraph 40 CFR 63.655(f)(2)(ii) for each emission point tested. **(40 CFR 63.655(i)(2))**

9. The permittee shall retain all other information required to be reported under paragraphs 40 CFR 63.655(a-h) for 5 years. **(40 CFR 63.655(i)(4))**

10. The permittee shall keep records describing the results of each seal gap measurement made in accordance with 40 CFR 63.120(b). The record shall include the date of the measurement, the raw data obtained in the measurement and the calculations described in 40 CFR 63.120(b)(3 and 4). **(40 CFR 63.123(d), 40 CFR 63.655(i))**

11. The permittee of each storage vessel as specified in 40 CFR 60.112b(a) shall keep records as required by paragraphs 40 CFR 60.115b(a, b, or c) .depending upon the control equipment installed to meet the requirements of 40 CFR 60.112b. **(40 CFR 60.115b)**

12. The permittee shall keep copies of all reports and records required by 40 CFR 60.115b, except for the record required by 40 CFR 60.115b(c)(1), for at least 5 years. The record required by 40 CFR 60.115b(c)(1) will be kept for the life of the control equipment. **(R336.1213(3)(b)(ii), 40 CFR 60.115b)**

13. After installing control equipment in accordance with 40 CFR 60.112b(a)(1) (fixed roof and internal floating roof), the permittee shall meet the following requirements: (40 CFR 60.115b(a))
    a. Keep a record of each inspection performed as required by 40 CFR 60.113b(a)(1-4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). **(40 CFR 60.115b(a)(2))**

14. The permittee for each storage vessel as specified in 40 CFR 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. **(40 CFR 60.116b(b))**

15. Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below: **(40 CFR 60.116b(e))**
    a. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. **(40 CFR 60.116b(e)(1))**
    b. For crude oil or refined petroleum products the vapor pressure may be obtained by the following: **(40 CFR 60.116b(e)(1)(2))**
        i. Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference--see 40 CFR 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). **(40 CFR 60.116b(e)(2)(i))**
        ii. The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa. **(40 CFR 60.116b(e)(2)(ii))**
    c. For other liquids, the vapor pressure: **(40 CFR 60.116b(e)(3))**
        i. May be obtained from standard reference texts, or
        ii. Determined by ASTM Method D2879-83 (incorporated by reference see 40 CFR 60.17); or
        iii. Measured by an appropriate method approved by the Administrator; or
        iv. Calculated by an appropriate method approved by the Administrator. **(40 CFR 60.116b(e)(3)(i-iv))**

16. The permittee for each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements. **(40 CFR 60.116b(f))**
    a. Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph 40 CFR 60.116b(e). **(40 CFR 60.116b(f)(1))**
    b. For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in 40 CFR 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:
        i. ASTM Method D2879-83 (incorporated by reference--see 40 CFR 60.17); or
        ii. ASTM Method D323-82 (incorporated by reference--see 40 CFR 60.17); or
        iii. As measured by an appropriate method as approved by the Administrator. **(40 CFR 60.116b(f)(2)(i-iii))**

17. The permittee shall comply with the applicable requirements of 40 CFR 60, Subpart Kb, section 60.116b (Monitoring of Operations) for EUTANK129-S1, EUTANK601-S1, EU29TANK40-S1, and EU29TANK41-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(b), R 336.2802, 40 CFR 52.21, 40 CFR 60.116b)**

18. The permittee shall comply with the requirements of 40 CFR 60.116b (Monitoring of Operations) that apply to tanks with external floating roofs, for EUTANK32-S1, EUTANK33-S1, EUTANK108-S1, EUTANK109-S1, EUTANK110-S1, EUTANK112-S1, EUTANK113-S1, EUTANK114-S1, EUTANK115-S1, EUTANK127-S1, EUTANK128-S1, and EUTANK130-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2802, 40 CFR 52.21)**

See Appendices 4-S1 and 7-S1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. Except as provided in paragraph 40 CFR 60.116b(g) the permittee for each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. **(40 CFR 60.116b(d))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

Requirements SC IX.1 thru SC IX.8 apply to EUTANK129-S1, EUTANK601-S1, EU29TANK40-S1, and EU29TANK41-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(b), R 336.2802, 40 CFR 52.21, 40 CFR 60.113b(b), 40 CFR Part 60, Subparts A and Kb)**
Requirements SC IX.1 thru SC IX.8 apply to EUTANK32-S1, EUTANK33-S1, EUTANK108-S1, EUTANK109-S1, EUTANK110-S1, EUTANK112-S1, EUTANK113-S1, EUTANK114-S1, EUTANK115-S1, EUTANK127-S1, EUTANK128-S1, and EUTANK130-S1.[2] **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2802, 40 CFR 52.21, 40 CFR 60.113b(b))**

1. The permittee shall determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.[2]
   a. Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.
   b. Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.
   c. If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs 40 CFR 60.113b(b)(1)(i and ii).

2. The permittee shall determine gap widths and areas in the primary and secondary seals individually by the following procedures:[2]
   a. Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.
   b. Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of storage vessel and measure the circumferential distance of each such location.
   c. The total surface area of each gap described in paragraph 40 CFR 60.113b(b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

3. The permittee shall add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph 40 CFR 60.113b(b)(4).[2]

4. The permittee shall make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the following requirements[2]
   a. The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm[2] per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm. (A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface. (B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.
   b. The secondary seal is to meet the following requirements: (A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph 40 CFR 60.113b(b)(2)(iii). (B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm[2] per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm. (C) There are to be no holes, tears, or other openings in the secondary seal or seal fabric.
   c. If a failure that is detected during inspections required in paragraph 40 CFR 60.113b(b)(1) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, two 30-day extensions may be requested from the Administrator in the inspection report required in 40 CFR 60.115(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

5. The permittee shall notify the Administrator 30 days in advance of any gap measurements required by paragraph 40 CFR 60.113b(b)(1) to afford the Administrator the opportunity to have an observer present.[2]

6. The permittee shall visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.[2]

7. If the external floating roof has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.[2]

8. For all the inspections required by paragraph 40 CFR 60.113b(b)(6), the permittee shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph 40 CFR 60.113b(b)(6) is not planned and the permittee could not have known about the inspection 30 days in advance of refilling the tank, the permittee shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.[2]

Requirements SC IX.9 thru SC IX.12 apply to all tanks in FGEFRTANKS-S1. **(R 336.1623, 40 CFR 63.640(n))**

9. The permittee shall comply with all applicable provisions of Rule 623, as they apply to FGEFRTANKS-S1.[2] **(R 336.1623)**

10. The permittee may utilize the provisions of 40 CFR 63.640(n) for storage vessels included in FG-EFRTANKS (Overlap of subpart CC with other regulations for storage vessels).[2] **(40 CFR 63.640(n))**

11. The permittee shall comply with all provision of the federal Standards of Performance of New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Kb, as they apply to FGEFRTANKS-S1.[2] **(40 CFR Part 60, Subparts A and Kb)**

12. The permittee shall document its current storage tank inspection and maintenance protocol. The protocol shall include provisions to increase inspection frequency on the storage tanks during winter months and to winterize the storage tank roof drains seasonally.[3] **(R 336.1201(3))**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).
[3] This condition is included at the request of the permittee.

FGTANKS133&134-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Both tanks store asphalt and have visible emission control equipment.

Emission Units: EUTANK133-S1, EUTANK134-S1

POLLUTION CONTROL EQUIPMENT

Particulate filtering device

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Opacity	0%[2]	Based Upon a Six Minute Average, except for one consecutive 15-Minute period in any 24-hour period when the transfer lines are being blown for clearance.	FGTANKS133&134-S1	SC VI.1	**40 CFR 60.472(c)**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not store any volatile organic liquid with a maximum true vapor pressure more than or equal to 3.5 kPa (0.5 psia) in the storage tank. **(40 CFR 60.110b(c), R 336.1213(3))**

2. The permittee shall not operate the storage tank unless the vapor recovery system is installed and operating properly. **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall verify the absence of visible emissions by taking six-minute visible emission readings for FGTANKS133&134-S1 a minimum of once per quarter, while the emission unit is operating. The reader shall take each visible emission reading during routine operating conditions and record the observation per Method 9. If the permittee observes any visible emissions, the permittee shall immediately initiate corrective actions. **(R 336.1213(3), 40 CFR 60.472(c))**

2. The permittee shall record the temperature of the stored product on a daily basis (alternative to true vapor pressure). **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall keep copies of all records required by 40 CFR 60.116b(b) for the life of the storage tank. **(40 CFR 60.116b(a))**

2. The permittee shall keep readily accessible records showing the dimension of the storage vessel and analysis showing the capacity of the storage vessel. **(40 CFR 60.116b(b))**

3. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 61, Subparts A and CC, as they apply to FGTANKS133&134-S1. **(40 CFR Part 63, Subparts A and CC)**

4. The permittee shall identify each storage tank subject to 40 CFR Part 63, Subpart CC requirements. **(40 CFR 63.655(f)(1)(i)(A))**

5. The permittee shall not bypass the control device for the asphalt storage tank during the 15-minute period when the transfer lines are being blown for clearance. **(40 CFR 60.472(c))**

6. In conducting the performance tests required in 40 CFR 60.8, the permittee shall use reference methods and procedures the test methods in 40 CFR, Part 60, Appendix A or other methods and procedures specified in 40 CFR 60.474. **(40 CFR 60.474(b))**

7. The permittee shall comply with all provision of the federal Standards of Performance of New Stationary Sources as specified in 40 CFR Part 60, Subparts A, Kb, and UU, as they apply to FGTANKS133&134-S1. **(40 CFR Part 60, Subparts A, Kb, and UUU)**

Footnotes:

[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGPROCUNITS-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Process groups subject to leak detection and repair requirements (LDAR). This flexible grouping is subject to the consolidated LDAR requirements of 40 CFR Part 60, Subparts VV or VVa; 40 CFR Part 60, Subparts GGG or GGGa; 40 CFR Part 63, Subpart CC as listed in Section V and VI of this table. For the purpose of this consolidated LDAR requirement the following are affected facilities: (1) compressors and (2) the group of all equipment (see definition in 40 CFR 60.591) within a process unit. Permit: 63-08E

Emission Units: EU04-VACUUM-S1, EU05-CRUDE-S1, EU07-DHT-S1, EU08-GOHT-S1, EU09-ALKYLATION-S1, EU11-FCCU-S1, EU12-GASCON-S1, EU13-PROPYLENE-S1, EU14-CCRPLATFORMER-S1, EU16-NAPHHYTREAT-S1, EU19-KEROHYTREAT-S1, EU21-CPTREATER-S1, EU22-TANKFARMS-S1, EU22-MELVLPGRAILRACK-S41, EU29-WASTEWATER-S1, EU38-ROUGETERMNL-S1, EU42-43SULRECOV-S1, EU99-LPGLOADRACK-S1, EU-41SOURWATER-S1, EU22-PENTLOAD-S1 EU22-ASPHLOAD-S1, EU70-COKER-S1, EU72-SULRBLOCK2-S1, EU73-SOURWATER2-S1, EU77-DHTHYTREAT-S1, EU76-UTILITIES-S1, EU78-FUELGASRECOVERY-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. For all pumps, a leak shall be defined as an instrument reading of 2,000 ppm or greater, as specified in NSPS Subpart VVa.[2] **(Consent Order No. 01-40119, 40 CFR Part 60, Subpart GGGa)**

2. For valves in gas/vapor or light liquid service: A leak shall be defined as an instrument reading of 500 ppm or greater, as specified in NSPS Subpart VVa.[2] **(Consent Order No. 01-40119, 40 CFR Part 60 Subpart GGGa)**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not cause or allow the emission of any volatile organic compound from any existing component, as listed in R 336.1622(2), of a petroleum refinery, including topping plants, unless all applicable provisions of 40 CFR 60.590 to 60.593 (2000), standards of performance for equipment leaks of volatile organic compound in petroleum refineries, are implemented. NOTE: The following more stringent leak definitions shall be implemented[2]: **(R 336.1622(1), 40 CFR Part 60, Subpart GGGa)**
   a. Pumps 2,000 ppm instead of 10,000 ppm.
   b. Valves in gas/vapor or light liquid service 500 ppm instead of 10,000 ppm.

2. The permittee shall not operate the Coker wet gas compressor (70C1) unless the compressor seal vent emissions are routed to a flare for destruction.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall comply with the provisions of 40 CFR 60.485 and 40 CFR 60.485a as applicable except as provided in 40 CFR 60.593 and 40 CFR 60.593a. **(R 336.1622(1), 40 CFR 60.592(d))**

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall comply with the requirements of 40 CFR 60.486, 40 CFR 60.486a, 40 CFR 60.487, and 40 CFR 60.487a as applicable. **(R 336.1622(1), 40 CFR 60.592(e))**

See Appendices 4-S1 and 7-S1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee may apply to the EPA Administrator for a determination of equivalency for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emission of VOC achieved by the controls required in 40 CFR Part 60, Subpart GGG or GGGa. In doing so, the permittee shall comply with the requirements of 40 CFR 60.484 or 40 CFR 60.484a.[2] **(R 336.1622(1), 40 CFR 60.592(c))**

2. The permittee subject to the provisions of subpart GGG or GGGa may comply with the following exemptions/provisions[2]: **(40 CFR 60.593, 40 CFR 60.593a)**
   a. Compressors in hydrogen service are exempt from the requirements of 40 CFR 63.648(a and c)/if the permittee demonstrates that a compressor is in hydrogen service. **(40 CFR 60.593(b)(1), 40 CFR 60.593a(b)(1))**
   b. Each compressor is presumed not to be in hydrogen service unless the permittee demonstrates that the piece of equipment is in hydrogen service. For a piece of equipment to be considered in hydrogen service, it must be determined that the percentage hydrogen content can be reasonably expected always to exceed 50% by volume. For purposes of determining the percentage hydrogen content in the process fluid that is contained in or contacts a compressor, procedures that conform to the general method described in ASTM E260-73, 91 or 96, E168-67, 77, or 92, or E169-63, 77, or 93 shall be used (incorporated by reference as specified in 40 CFR 60.17). [ASTM E260 is "Standard Practices for Packed Column Gas Chromatography"; ASTM E168 is "Standard Practices for General Techniques of Infrared Quantitative Analysis"; E169 is "Standard Practices for General Techniques of Ultraviolet – Visible Quantitative Analysis". **(40 CFR 60.593(b)(2), 40 CFR 60.593a(b)(2), 40 CFR 63.648(g)(2)(i)(A))**

c. The permittee may use engineering judgment rather than procedures in paragraph (b) of this condition to demonstrate that the percent content exceeds 50 % by volume, provided the engineering judgment demonstrates that the content clearly exceeds 50 % by volume. When the permittee and the Administrator do not agree on whether a piece of equipment is in hydrogen service, the procedures in paragraph (b) shall be used to resolve the disagreement. **(40 CFR 60.593(b)(3)(i), 40 CFR 60.593a(b)(3)(i))**
d. If the permittee determines that a piece of equipment is in hydrogen service, the determination can be revised only by following the procedures in paragraph (b) of this condition. **(40 CFR 60.593(b)(3)(ii), 40 CFR 60.593a(b)(3)(ii))**
e. The permittee may use the following provision in addition to 40 CFR 60.485(e) or 40 CFR 60.485a(e): Equipment is in light liquid service if the percent evaporated is greater than 10% at 150°C as determined by ASTM Method D86-78, 82, 90, 95, or 96 (incorporated by reference as specified in 40 CFR 60.18). **(40 CFR 60.593(d), 40 CFR 60.593a(d))**
f. Calculation of percentage leaking equipment components for 40 CFR Part 60, Subpart VV or VVa may be done on a process unit basis or a sourcewide basis. Once the permittee has decided, all subsequent calculations shall be on the same basis unless a permit change is made. **(40 CFR63.648(a)(2))**
g. Reciprocating pumps in light liquid service are exempt from 40 CFR 60.482 and 40 CFR 60.482a if recasting the distance piece or reciprocating pump replacement is required. **(40 CFR 63.648(f))**
h. Reciprocating compressors are exempt from seal requirements if recasting the distance piece or compressor replacement is required. **(40 CFR 63.648(i))**

3. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart GGGa as soon as practicable after startup of the heavy oil upgrade project.[2] **(R 336.1622(1), 40 CFR 60.592(a), 40 CFR Part 60, Subpart GGGa)**

4. The permittee may elect to comply with the requirements of 40 CFR 60.483-1 and 40 CFR 60.483-2.[2] **(R 336.1622(1), 40 CFR 60.592(b))**

5. Compliance with SC III.1, SC V.1, SC VI.1, and SC IX.1 thru SC IX.4 shall be considered compliance with Michigan Air Pollution Control Rule R 336.1622 and the equipment leak standards in 40 CFR Part 63, Subpart CC-National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries.[2] **(40 CFR Part 63, Subpart CC)**

6. The permittee shall comply with all applicable provisions of the following regulations: 40 CFR Part 60, Subpart VVa and GGGa[2]: **(R 336.1205, R 336.1225, R 336.1226(d), R 336.1702(a), R 336.2802, 40 CFR 52.21, 40 CFR 60, Subparts A, VVa, and GGGa)**
   a. Pumps 2,000 ppm.
   b. Valves in gas/vapor or light liquid service 500 ppm.

7. The permittee shall implement a program to monitor at least 90% of the flanges and connectors in gas/vapor and light liquid VOC service in the following emission units: EU70-COKER-S1, EU72-SULRBLOCK2-S1, EU73-SOURWATER2-S1, EU77-DHTHYTREAT-S1, EU22-TANKFARMS, EU76-UTILITIES-S1, and EU78-FUELGASRECOVERY-S1. The program shall meet the following requirements.[2] **(R 336.1205, R 336.1225, R 336.1226(d), R 336.1702(a), R 336.2802, 40 CFR 52.21)**
   a. Monitoring shall be conducted on a quarterly basis, using test methods and procedures described in Appendix 1.5, Section D of RO Permit 199700013c.
   b. A leak shall be defined as an instrument reading of 500 ppm or greater, as specified in NSPS Subpart VVa.
   c. Flanges and connectors may be excluded from the monitoring program if they are "unsafe to monitor" as defined in 40 CFR 60.482-7(g)(1), or "difficult to monitor" as defined in 40 CFR 60.482-7(h)(1).
   d. The permittee shall maintain records utilizing the procedures in Appendix 1.4, Section E, of RO permit 199700013c.

8. The permittee shall implement a program to monitor at least 50% of the flanges and connectors in gas/vapor and light liquid VOC service in the following emission units: EU04-VACUUM, EU05-CRUDE, EU08-GOHT, EU16-NAPHHYTREAT, EU19-KEROHYTREAT, EU14-CCRPLATFORMER, and EU21-CPTREATER. The program shall meet the following requirements.[2] **(R 336.1205, R 336.1225, R 336.1226(d), R 336.1702(a), R 336.2802)**

a. Monitoring shall be conducted on a quarterly basis, using test methods and procedures described in Appendix 1.5, Section D of RO Permit 199700013c.
b. A leak shall be defined as an instrument reading of 500 ppm or greater, as specified in NSPS Subpart VVa.
c. Flanges and connectors may be excluded from the monitoring program if they are "unsafe to monitor" as defined in 40 CFR 60.482-7(g)(1), or "difficult to monitor" as defined in 40 CFR 60.482-7(h)(1).
d. The permittee shall maintain records utilizing the procedures in Appendix 1.4, Section E, of RO permit 199700013c.

9. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A, VV, GGG, and GGGa, as they apply to FGPROCUNITS-S1.[2] **(40 CFR Part 60, Subparts A, VV, GGG, and GGGa)**

10. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and CC, as they apply to FGPROCUNITS-S1.[2] **(40 CFR Part 63, Subparts A and CC)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG29-IGF-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Two induced gas floatation units which are part of the wastewater treatment plant and are covered by permit 190-00A. Permit: 63-08E

Emission Units: EU29-IGF1-S1, EU29-IGF2-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	8.41 Tons/Year[2]	Based upon a 12-month rolling time period.	FG29-IGF-S1	SC VI.3	**R 336.1702(a), R 336.1225(3)(a)**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The wastewater throughput for FG29-IGF-S1 shall not exceed 1,682,000,000 gallons per 12-month rolling time period as determined at the end of each calendar month.[2] **(R 336.1225, R 336.1702(a))**

2. The permittee shall not operate EU29-IGF1-S1 or EU29-IGF2-S1 unless the fixed roofs and conservation vent for the emission unit are installed and operating properly.[2] **(R 336.1225, R 336.1702(a), R 336.1910)**

3. The pressure setting on decant vessel conservation vents in FG29-IGF-S1 shall be equal to or greater than 2.0 pounds per square inch gauge.[2] **(R 336.1225, R 336.1702(a), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

See Appendix 5-S1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor the pressure setting on each decant vessel conservation vent in a manner and with instrumentation acceptable to the Division.[2] **(R 336.1225, R 336.1702(a), R 336.1910)**

2. The permittee shall continuously monitor the wastewater throughput for FG29-IGF-S1 in a manner and with instrumentation acceptable to the Division.[2] **(R 336.1225, R 336.1702(a), R 336.1910)**

3. The permittee shall maintain the following written records for FG29-IGF-S1[2]: **(R 336.1225, R 336.1702(a), R 336.1910)**
   a. A record of monthly wastewater throughputs as determined at the end of each calendar month.
   b. A record of monthly VOC emission rate including the 12-month rolling time period emission rate.
   c. A record demonstrating the calculations used to determine the VOC emission rate.
   d. Once every shift, the permittee shall record the pressure setting for each decant vessel conservation vent. Pressure setting shall mean Nitrogen pressure on the valve.
   e. Once every shift, the permittee shall record the position of each decant vessel conservation vent valve.

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV29-IGF1	6[1]	20[1]	**R 336.1225**
2. SV29-IGF2	6[1]	20[1]	**R 336.1225**

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 61, Subparts A and FF, as they apply to FG29-IGF-S1.[2] **(40 CFR Part 61, Subparts A and FF)**

2. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and CC, as they apply to FG29-IGF-S1.[2] **(40 CFR Part 63, Subparts A and CC)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG29TANKS40-41-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Two external floating roof (EFR) tanks for slop oil in the wastewater treatment plant (WWTP). These tanks are subject to 40 CFR Part 60, Subpart QQQ.

Emission Units: EU29TANK40-S1, EU29TANK41-S1

POLLUTION CONTROL EQUIPMENT

External Floating Roof

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	0.3 Tons per month[2]	Monthly Basis	FGTANKS40-41-S1	SC VI.3	**R 336.1201(a), R 336.1702(a)**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Slop Oil	4.3 million gallons per month[2]	Monthly Basis	FGTANKS40-41-S1	SC VI.2	**R 336.1201(a), R 336.1702(a)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Each external floating roof shall be equipped with a welded deck and mechanical shoe primary seal.[2] **(R 336.1201(a), R 336.1702(a), R 336.1901)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall perform inspections and monitor operating information for FG29TANKS40-41-S1 in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart A and QQQ. **(40 CFR Part 60, Subpart A and Kb)**

2. The permittee shall keep records of the FG29TANKS40-41-S1 throughput of slop oil for each calendar month. All records shall be made available to the Department upon request.[2] **(R 336.1201(a), R 336.1702(a))**

3. The permittee shall keep records of inspections and operating information for FG29TANKS40-41-S1 in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart A and QQQ. All records shall be made available to the Department upon request. **(40 CFR Part 60, Subpart A and QQQ)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and QQQ, as they apply to FG29TANKS40-41. **(40 CFR Part 60, Subparts A and QQQ)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGCRUDETANKS-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

External floating roof (EFR) tanks that are subject to 40 CFR Part 63, Subpart CC as Group 1 Vessels or subject to 40 CFR Part 60, Subpart Kb. These tanks may also be subject to Michigan Air Pollution Control Rule 623 (R 336.1623) and/or NSPS Subpart QQQ. This consolidated requirement basically adopts NSPS Kb for these EFR tanks. Permit: 63-08E

Emission Units: EUTANK112-S1, EUTANK113-S1, EUTANK114-S1, EUTANK115-S1, EUTANK129-S1, EUTANK130-S1.

POLLUTION CONTROL EQUIPMENT

External Floating Roof

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Crude Oil	140,000 barrels per day[1]	Based upon an annual average	FGCRUDETANKS-S1	SC VI.3	**R 336.1225**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall maintain each storage tank in FGCRUDETANKS-S1 with the following equipment, or a deck and seal configuration that results in the same or lower VOC emissions from the tanks[2]: **(40 CFR 52.21(a and b))**
   a. floating roof.
   b. welded deck.
   c. mechanical shoe primary seal.
   d. rim-mounted secondary seal.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall perform inspections and monitor operating information for FGCRUDETANKS-S1 in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Kb.[2] **(40 CFR Part 60, Subparts A and Kb)**

2. The permittee shall keep records of inspections and operating information for FGCRUDETANKS-S1 in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Kb. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(40 CFR Part 60, Subparts A and Kb)**

3. The permittee shall keep annual VOC emission calculations and monthly throughput records for FGCRUDETANKS-S1. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1225, 40 CFR 52.21(a and b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Kb as they apply to FGCRUDETANKS-S1.[2] **(40 CFR Part 60, Subparts A and Kb)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGNAPHTHATANKS-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This flexible group represents a consolidated requirement for internal and external floating roof tanks that are subject to 40 CFR Part 63, Subpart CC as Group 1 Vessels or subject to 40 CFR Part 60, Subpart Kb. These tanks may also be subject to Michigan Air Pollution Control Rule 623 (Rn336.1623) and/or NSPS Subpart QQQ. This consolidated requirement basically adopts NSPS Kb for these tanks. Permit: 63-08E

Emission Units: EUTANK19-S1, EUTANK40-S1, EUTANK45-S1, EUTANK46-S1, EUTANK47-S1, EUTANK48-S1, EUTANK49-S1, EUTANK53-S1, EUTANK55-S1, EUTANK57-S1, EUTANK58-S1, EUTANK61-S1, EUTANK72-S1, EUTANK101-S1, EUTANK108-S1, EUTANK109-S1, EUTANK110-S1, EUTANK116-S1, EUTANK22T118-S1, EUTANK127-S1, EUTANK128-S1, EUTANK104-S1, EUTANK120-S1, EUTANK29T79-S1, EUETHTANK-S1.

POLLUTION CONTROL EQUIPMENT

Internal Floating Roofs, External Floating Roofs

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Toluene	4000 barrels per day[2]	Based upon a monthly average	FGNAPHTHATANKS-S1	SC VI.3	**R 336.1205, R 336.1225, R 336.1702, 40 CFR 52.21(b)(3)**
2. Xylene Mixture (Mixture of Ethylbenzene and mixed xylenes)	4000 barrels per day[2]	Based upon a monthly average	FGNAPHTHATANKS-S1	SC VI.3	**R 336.1205, R 336.1228, R 336.1702, 40 CFR 52.21(b)(3)**
3. Cumene	4000 barrels per day[2]	Based upon a monthly average	FGNAPHTHATANKS-S1	SC VI.3	**R 336.1205, R 336.1228, R 336.1702, 40 CFR 52.21(b)(3)**
4. NHT Charge	38,400 barrels per day[1]	Based upon a monthly average	FGNAPHTHATANKS-S1	SC VI.3	**R 336.1225**
5. Sweet Naphtha	38,400 barrels per day[1]	Based upon a monthly average	FGNAPHTHATANKS-S1	SC VI.3	**R 336.1225**
6. Reformate Naphtha	24,000 barrels per day[1]	Based upon a monthly average	FGNAPHTHATANKS-S1	SC VI.3	**R 336.1225**
7. FCCU Naphtha	30,420 barrels per day[1]	Based upon a monthly average	FGNAPHTHATANKS-S1	SC VI.3	**R 336.1225**

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
8. Alkylate Naphtha	8,300 barrels per day[1]	Based upon a monthly average	FGNAPHTHATANKS-S1	SC VI.3	**R 336.1225**
9. Ethanol	17,340 barrels per day[1]	Based upon a monthly average	FGNAPHTHATANKS-S1	SC VI.3	**R 336.1225**
10. Gasoline	95,000 barrels per day[1]	Based upon a monthly average	FGNAPHTHATANKS-S1	SC VI.3	**R 336.1225**
11. Coker Naphtha	36,000 barrels per day[1]	Based upon a monthly average	FGNAPHTHATANKS-S1	SC VI.3	**R 336.1225**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUTANK108-S1, EUTANK109-S1, EUTANK110-S1, and EUTANK128-S1 with slotted guidepole controls.[2] **(R 336.1225, R 336.1702)**

2. The permittee shall maintain each storage tank in FGNAPHTHATANKS-S1 with the following deck and seal configuration, or a deck and seal configuration that results in the same or lower VOC emissions from the tanks:[2] **(R 336.1225, R 336.1702)**

Equipment	Type	Deck	Primary Seal	Secondary Seal
EUTANK19-S1	Internal floating roof	Welded	Mechanical Shoe	None
EUTANK40-S1	Internal floating roof	Welded	Mechanical Shoe	None
EUTANK45-S1	Internal floating roof	Bolted	Vapor Mounted	Rim - Mounted
EUTANK46-S1	Internal floating roof	Bolted	Vapor Mounted	Rim - Mounted
EUTANK47-S1	Internal floating roof	Bolted	Vapor Mounted	Rim - Mounted
EUTANK48-S1	Internal floating roof	Bolted	Vapor Mounted	Rim - Mounted
EUTANK49-S1	Internal floating roof	Welded	Mechanical Shoe	None
EUTANK53-S1	Internal floating roof	Welded	Mechanical Shoe	None
EUTANK55-S1	Internal floating roof	Welded	Mechanical Shoe	None
EUTANK57-S1	Internal floating roof	Welded	Mechanical Shoe	None
EUTANK58-S1	Internal floating roof	Welded	Mechanical Shoe	None
EUTANK61-S1	Internal floating roof	Welded	Mechanical Shoe	None

Equipment	Type	Deck	Primary Seal	Secondary Seal
EUTANK72-S1	Internal floating roof	Bolted	Vapor Mounted	Rim - Mounted
EUTANK101-S1	Internal floating roof	Welded	Mechanical Shoe	None
EUTANK108-S1	External floating roof	Welded	Mechanical Shoe	Rim - Mounted
EUTANK109-S1	External floating roof	Welded	Mechanical Shoe	Rim - Mounted
EUTANK110-S1	External floating roof	Welded	Mechanical Shoe	Rim - Mounted
EUTANK116-S1	Internal floating roof	Welded	Liquid Mounted	None
EUTANK22T118-S1	Internal floating roof	Welded	Mechanical Shoe	None
EUTANK127-S1	External floating roof	Welded	Mechanical Shoe	Rim - Mounted
EUTANK128-S1	External floating roof	Welded	Mechanical Shoe	Rim - Mounted
EUTANK29T79-S1	Internal floating roof	Welded	Mechanical Shoe	None
EUTANK104-S1	Internal floating roof	Welded	Mechanical Shoe	None
EUTANK120-S1	Internal floating roof	Welded	Mechanical Shoe	None
EUETHTANK	Internal floating roof	Welded	Mechanical Shoe	None

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall perform inspections and monitor operating information for FGNAPHTHATANKS-S1 in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Kb.[2] **(40 CFR Part 60, Subparts A and Kb)**

2. The permittee shall keep records of inspections and operating information for FGNAPHTHATANKS-S1 in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Kb. The permittee shall keep all records on file at the facility and shall make them available to the Department upon request.[2] **(40 CFR Part 60, Subparts A and Kb)**

3. The permittee shall keep annual VOC emission calculations and monthly throughput records for FGNAPHTHATANKS-S1. The permittee shall keep all records on file at the facility and shall make them available to the Department upon request.[2] **(R336.1225, R336.1702)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Kb, as they apply to FGNAPHTHATANKS-S1.[2] **(40 CFR Part 60 Subparts A and Kb)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGASPHALTLOADING-S1/S2
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

All asphalt cement loading operations at the stationary source for railcars, trucks and barges. (This flexible group has emission units in Sections 1 and 2 of the ROP.)

Emission Units: EU22-ASPHLOAD-S1, EU_ASPHALT-S2, EU38-BARGELOAD-S1.

POLLUTION CONTROL EQUIPMENT

None for the flexible group as a whole.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Asphalt cement loaded	450,000,000 gpy[2]	Rolling 12-month time period as determined at the end of each calendar month	FGASPHALTLOADING-S1/S2	SC VI.2	**R 336.1201(3)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1201(3))**

2. The permittee shall record the amount of asphalt cement loaded for FGASPHALTLOADING-S1/S2 monthly, for the preceding 12-month rolling time period, in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[2] **(R 336.1201(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG-RAGLAYERTANKS-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Storage to allow improved management of the rag layer formed in the desalter.

Emission Units: EU-5TANK18-S1, EU-5TANK19-S1

POLLUTION CONTROL EQUIPMENT

Each tank has an internal floating roof.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	0.13 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FG-RagLayerTanks-S1	SC II.1	**R 336.1225, R 336.1702(b)**

II. MATERIAL LIMIT(S)

1. The material throughput for each tank in FG-RagLayerTanks-S1 shall not exceed 900,000 gallons per 12-month rolling time period as determined at the end of each calendar month.[2] **(R 336.1225, R 336.1702(b))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall comply with all provisions of the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Kb, as they apply to each tank in FG-RagLayerTanks-S1.[2] **(40 CFR Part 60 Subparts A and Kb)**

2. The permittee shall comply with all provisions of the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and GGGa, as they apply to FG-RagLayerTanks-S1.[2] **(40 CFR Part 60, Subparts A and GGGa)**

3. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants (NESHAP) as specified in 40 CFR Part 61, Subparts A and FF, as they apply to each tank in FG-RagLayerTanks-S1.[2] **(40 CFR Part 61 Subparts A and FF)**

4. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants (NESHAP) as specified in 40 CFR Part 63, Subparts A and CC, as they apply to FG-RagLayerTanks-S1.[2] **(40 CFR Part 63 Subparts A and CC)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the storage tanks with the deck and seal configuration listed in the following table.[2] **(R 336.1702(b))**

Equipment	Type	Deck	Primary Seal	Secondary Seal
a. EU5TANK18-S1	Internal floating roof	Welded	Mechanical shoe	None
b. EU5TANK19-S1	Internal floating roof	Welded	Mechanical shoe	None

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall perform inspections and monitor operating information for each tank in FG-RagLayerTanks-S1 in accordance with the federal Standards of Performance for New Stationary sources as specified in 40 CFR Part 60, Subparts A and Kb. The permittee shall keep inspection and operating information records on file at the facility and make them available to the Department upon request.[2] **(R 336.1702(b), 40 CFR Part 60, Subparts A and Kb)**

2. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1225, R 336.1702(b))**

3. The permittee shall keep records of the material throughput for each tank in FG-RagLayerTanks-S1 for each calendar month and 12-month rolling time period. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1225, R 336.1702(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG-BOILERS-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

The two existing refinery boilers and the temporary boiler that is to be used to allow one of those boilers to power down. Permit: 18-12B

Emission Units: EU27-ZURNBOILER-S1, EU27-B&WBOILER1-S1, and EU-TEMP_BOILER-S1

POLLUTION CONTROL EQUIPMENT

Each piece of equipment has its own control.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural gas or refinery fuel gas burned	510,000 cubic feet per hour based on 1,000 BTU/cubic foot[2]	Test protocol	FG-BOILERS	SC VI.1	**R 336.1205, R 336.2801 R 336.2802 40 CFR 52.21 40 CFR Part 60, Subpart Db**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The heat input for FG-BOILERS-S1 shall not exceed 510 MMBtu/hr on a daily average. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.2802, R 336.2803, R 336.2804, 40 CFR 52.21)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep records of daily fuel consumption rates, refinery and natural gas fuel values, and calculations of the BTU/hr heat input rates for FG- BOILERS-S1. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.2802, 40 CFR 52.21, R 336.1205, R 336.1225, R 336.1702(a))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGCOOLTOWERS-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

These requirements apply to the cooling towers that are new or being modified as part of the heavy oil upgrade project (HOUP): D, E, G, H, and the new cooling tower. These requirements also apply to existing cooling towers that are not being modified as part of the HOUP: A, C, and F. Permit: 63-08E

Emission Units: EUCOOLTOWERA-S1, EUCOOLTOWERC-S1, EUCOOLTOWERD-S1, EUCOOLTOWERE-S1, EUCOOLTOWERF-S1, EUCOOLTOWERG-S1, EUCOOLTOWERH-S1, and EUCOOLTOWERNEW-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall submit, to the AQD District Supervisor, an inspection and maintenance program for each cooling tower in FGCOOLTOWERS-S1. The permittee shall comply with the submitted program until the AQD District Supervisor approves the program or approves an amended program. Thereafter, the permittee shall comply with the approved program. At any time, the permittee may submit a modified program to the AQD District Supervisor for review and approval.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

2. The permittee shall submit to the AQD District Supervisor, a program for monitoring each cooling tower in FGCOOLTOWERS-S1 for leaks of process fluids into the cooling water. The submitted program shall include, as a minimum, all of the following:
   a. A description of the parameter or condition to be monitored and an explanation of how the selected parameter or condition will reliably indicate the presence of a leak.
   b. The parameter level(s) or conditions(s) that shall constitute a leak. This shall be documented by data or calculations showing that the selected levels or conditions will reliably identify leaks. The monitoring must be sufficiently sensitive to determine the range of parameter levels or conditions when the system is not leaking. When the selected parameter level or condition is outside that range, a leak is indicated.
   c. The monitoring frequency which shall be no less frequent than monthly for the first 6 months and quarterly thereafter to detect leaks.
   d. The records that will be maintained to document compliance with the requirements of this section.
   e. If a leak is detected, the permittee shall comply with the following requirements:
      i. The leak shall be repaired as soon as practical but not later than 45 calendar days after the permittee receives results of monitoring tests indicating a leak. The leak shall be repaired unless the permittee demonstrates that the results are due to a condition other than a leak. Once the leak has been repaired, the permittee shall confirm that the heat exchange system has been repaired within seven calendar days of the repair or startup, whichever is later.
      ii. Delay of repair of heat exchange systems for which leaks have been detected is allowed if the equipment is isolated from the process. Delay of repair is also allowed if repair is technically infeasible without a shutdown and any one of the following conditions are met. All of the following time periods shall be determined from the date when the permittee determines that delay of repair is necessary.

A. If a shutdown is expected within the next 2 months, a special shutdown before that planned shutdown is not required. Documentation of a decision to delay repair shall state the reasons repair was delayed and shall specify a schedule for completing the repair as soon as practical.
B. If a shutdown for repair would cause greater emissions than the potential emissions from delaying repair, the permittee may delay repair until the next shutdown of the process equipment associated with the leaking heat exchanger. The permittee shall document the basis for the determination that a shutdown for repair would cause greater emissions than the emissions likely to result from delaying repair.
C. If a shutdown is not expected within the next 2 months, and the permittee delays repair because the necessary parts or personnel are not available, the permittee may delay repair up to a maximum of 120 calendar days. The permittee shall demonstrate that the necessary parts or personnel were not available.

The permittee shall comply with the submitted program until the AQD District Supervisor approves the program or approves an amended program. Thereafter, the permittee shall comply with the approved program. At any time, the permittee may submit a modified program to the AQD District Supervisor for review and approval.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each cooling tower in FGCOOLTOWERS-S1 with drift eliminators with a vendor-certified maximum drift rate of 0.005% or less.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Every seven years, the permittee shall determine drift loss from EUCOOLTOWERA-S1, EUCOOLTOWERC-S1, EUCOOLTOWERD-S1, EUCOOLTOWERE-S1, EUCOOLTOWERF-S1, EUCOOLTOWERG-S1, EUCOOLTOWERH-S1 and EUCOOLTOWERNEW-S1 by testing, at owner's expense, in accordance with Department requirements. The permittee shall use the 1994 version of the Cooling Technology Institute's Acceptable Test Code (ATC) 140, unless the AQD approves use of an alternate method. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Determination of drift loss includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. For each cooling tower in FGCOOLTOWERS-S1, the permittee shall maintain a record, for the life of the cooling tower, of the vendor's certification required in SC IV.1.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

2. The permittee shall monitor the following for each cooling tower in FGCOOLTOWERS-S1.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**
   a. On a weekly basis, parameters needed to determine the total dissolved solids content of the circulating water.
   b. On a monthly basis, parameters needed to determine the water recirculation rate.

3. The permittee shall calculate the PM and PM10 emission rates from each cooling tower in FGCOOLTOWERS-S1 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

4. The permittee shall keep, for each cooling tower in FGCOOLTOWERS-S1, a record of the date the two most recent drift loss determinations were conducted. This record shall be maintained for more than five years if necessary.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. If the permittee invokes the delay of repair provisions for a heat exchange system, the following information shall be submitted in the next semi-annual periodic report required by 40 CFR 63.152(c). If the leak remains unrepaired, the information shall also be submitted in each subsequent periodic report, until repair of the leak is reported.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**
   a. The permittee shall report the presence of the leak and the date that the leak was detected.
   b. The permittee shall report whether or not the leak has been repaired.
   c. The permittee shall report the reason(s) for delay of repair. If delay of repair is invoked because a shutdown for repair would cause greater emissions than the potential emissions from delaying repair, documentation of emissions estimates must also be submitted.
   d. If the leak remains unrepaired, the permittee shall report the expected date of repair.
   e. If the leak is repaired, the permittee shall report the date the leak was successfully repaired.

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the National Emissions Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and CC, as they apply to FGCOOLTOWERS-S1. **(40 CFR Part 63, Subparts A and CC.)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGDHOUPANNUAL-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

These emission units and flexible groups used the Actual-to-Potential test for PSD applicability. The emission limits in this group serve to limit the Potential to Emit of covered equipment. ~~Permit: 63-08E~~

Emission Units: EU11-FCCU-S1, EU14-CCRPLCATREG-S1, EU21-S2OFFGAS-S1, FG29-IGF-S1, EU42-43SULRECOV-S1, EU70-COKER-S1, EU-COKERFLARE-S1, EU72-SULRBLOCK2-S1, FG-HEATERS-S1, FG-PROCUNITS-S1, FGCOOLTOWERS-S1, FGHOUPTANKS-S1, EU71-H2STEAMSYS-S3, EU27-B&WBOILER1-S1, EU27-ZURNBOILER-S1, EU08-GOHTCHARHTR2-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	122.2 tpy[2,A]	Rolling 12-month time period *	FGDHOUPANNUAL-S1	SC VI.1	**R 336.1205, R 336.2802, 40 CFR 52.21**
2. PM10	206.6 tpy[2,A]	Rolling 12-month time period *	FGDHOUPANNUAL-S1	SC VI.1	**R 336.1205, R 336.2802, 40 CFR 52.21**
3. NO_X	642 tpy[2,A]	Rolling 12-month time period *	FGDHOUPANNUAL-S1	SC VI.1	**R 336.1205, R 336.2802, 40 CFR 52.21**
4. SO_2	371 tpy[2,A]	Rolling 12-month time period *	FGDHOUPANNUAL-S1	SC VI.1	**R 336.1205, R 336.2802, 40 CFR 52.21**
5. SO_2	300 tpy[3]	Rolling 12-month time period *	FGDHOUPANNUAL-S1	SC VI.1	R 336.1201(3)
~~5.~~6. CO	251.5 tpy[2,A]	Rolling 12-month time period *	FGDHOUPANNUAL-S1	SC VI.1	**R 336.1205, R 336.2802, 40 CFR 52.21**
~~6.~~7. VOC	462 tpy[2,A]	Rolling 12-month time period *	FGDHOUPANNUAL-S1	SC VI.1	**R 336.1205, R 336.2802, 40 CFR 52.21**
~~7.~~8. H_2SO_4	22.76 tpy[2,A]	Rolling 12-month time period *	FGDHOUPANNUAL-S1	SC VI.1	**R 336.1205, R 336.2802, 40 CFR 52.21**
~~8.~~9. H_2S	8.44 tpy[2,A]	Rolling 12-month time period *	FGDHOUPANNUAL-S1	SC VI.1	**R 336.1205, R 336.2802, 40 CFR 52.21**
~~9.~~10. Total reduced sulfur (TRS)	9.73 tpy[2,A]	Rolling 12-month time period *	FGDHOUPANNUAL-S1	SC VI.1	**R 336.1205, R 336.2802, 40 CFR 52.21**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
[A] This limit is the summation of the emissions from the equipment FGDHOUPANNUAL-S1 and FGDHOUPANNUAL-S3. * Rolling 12-month time period as determined at the end of each calendar month. Limits on the units and processes put in place in this permit for the operation of the facility will not cause a combination of increases or decreases that would violate the netting conclusion.					

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall calculate the PM, PM10, NO_X, SO_2, CO, VOC, H_2SO4, H_2S, and TRS emission rates from FGDHOUPANNUAL-S1 monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor, considering the following.[2] **(R 336.1205, R 336.2802, 40 CFR 52.21, 40 CFR Part 51, Appendix S)**
   a. For storage tanks, the permittee may maintain VOC, H_2S, and TRS emission calculations and monthly throughput records in lieu of performing monthly VOC, H_2S, and TRS calculations.
   b. CO emissions during periods of startup, shutdown, and malfunction for each emission unit in FG-HEATERS-S1 without a CO CEMS shall be calculated at 400 ppmv at 3% excess oxygen. For each emission unit in FGHEATERS-S1 without a CO CEMS, for which the permittee has collected CO emissions data during startup, shutdown and malfunction periods from representative process heaters, the permittee may, after submitting a demonstration to the AQD District Supervisor that the emission data is representative, use the representative process heater data for calculating the CO emission rate from that emission unit.
   c. VOC, H_2S, and TRS emissions from cooling towers shall be calculated for periods of leaks of process fluids into the cooling water.
   d. H_2S and TRS emissions from EU72-SULRBLOCK2-S1 shall include the emissions resulting from non-operation of the sulfur pit degassing system.
   e. Fugitive emissions from all components that may leak, such as those addressed in leak detection and repair programs.
   f. H_2S and TRS emissions from sulfur recovery and loading operations.
   g. All emission calculations shall include emissions from startups, shutdowns, and malfunctions.
   h. The data obtained from the sulfur content sampling program for various sulfur laden products and process streams.
   i. Emissions resulting from the steam to hydrocarbon ration not being maintained at the appropriate level for each flare.

2. The permittee shall calculate and keep records of the annual emissions of PM, PM10, NO_X, VOC, CO, SO_2, sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), and Total Reduced Sulfur (TRS) from the Detroit heavy oil

upgrade project (Detroit HOUP), in tons per year on a calendar year basis. Records shall be kept in the format described in 4.F of Appendix 4-S1, or an alternate format acceptable to the AQD Permit Section Supervisor. Calculations and record keeping shall begin the month in which the Detroit HOUP begins normal operations and shall continue for 10 years after November 5, 2012.[2] **(R 336.2818, 40 CFR 52.21(r)(6)(iii), 40 CFR Part 51, Appendix S)**

3. The permittee shall calculate, keep records of, and annually report to the AQD, the annual emissions of PM, PM10, NO_x, VOC, CO, SO_2, sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), and Total Reduced Sulfur (TRS) from the Detroit heavy oil upgrade project (Detroit HOUP), in tons per year on a calendar year basis. Calculations shall be based on the best available and representative data. Supporting documentation shall be submitted with the emissions report, and shall be generally consistent with the format and specificity of Exhibit 7 of the Sierra Club Agreement. Records shall be kept in the format described in 4.F of Appendix 4-S1, or an alternate format acceptable to the AQD Permit Section Supervisor. Calculations and record keeping shall begin the month in which the Detroit HOUP begins normal operations and shall continue for 10 years after November 5, 2012.[3] **(R 336.1201(3))**

See Appendix 4F-S1

VII. REPORTING

~~1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the date of completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than 180 days after the start-up of EU70-COKER-S1. (R 336.1216(1), R 336.1201(7)(a))~~

2. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

3. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

4. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

5. The permittee shall submit the information required by SC VI.1 to the AQD Permit Section Supervisor within 60 days following the end of each reporting year if both the following occur for any of these pollutants:
   a. The calendar year actual emission from the Detroit HOUP exceed the baseline actual emissions (BAE) by a significant amount, and
   b. The calendar year actual emissions from the Detroit HOUP differ from the pre-construction projection for the emission units included in the Hybrid Applicability Test used for the Detroit HOUP. The pre-construction projection is the sum of the projected actual emissions from each emission unit using the actual-to-projected actual emissions test as part of the Hybrid Applicability Test, and the potential emissions from each emission unit using the potential-to-emit test as part of the Hybrid Applicability Test.

   The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to this SC, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projection).[2] **(R 336.2818, 40 CFR 52.21(r)(6)(v))**

6. The permittee shall submit the information required by SC VI.1 to the AQD Permit Section Supervisor within 60 days following the end of each reporting year. The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to this SC, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projection).[3] **(R 336.1201(3))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).
[3] This condition is included at the request of the permittee.

FGMACTDDDDD-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

All boilers and process heaters at the Detroit Refinery are regulated under the standards in 40 CFR Part 63, Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Permit: 63-08E

Emission Units: All boilers and process heaters at the Detroit Refinery

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall conduct a tune-up of each boiler and process heater beginning January 31, 2016, annually, biennially, or once every five years, depending on its size, as specified in 40 CFR 63.7540.[2] **(40 CFR 63.7500)**
   a. Annually (within 13 months) for each boiler or process heater greater than or equal to 10 MMBTU/hr.
   b. Biennially (within 25 months) for each boiler or process heater greater than 5 MMBTU/hr and less than 10 MMBTU/hr.
   c. Every five years (within 61 months) for each boiler or process heater less than or equal to 5 MMBTU/hr.

2. The permittee must have a one-time energy assessment performed by a qualified energy assessor for each boiler and process heater as required in Table 3 of 40 CFR Part 63, Subpart DDDDD.[2] **(40 CFR 63.7500)**

3. At all times, you must operate and maintain any affected source (as defined in 40 CFR 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.[2] **(40 CFR 63.7500)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit reports for each boiler or process heater as required by 40 CFR 63.7550.[2] **(40 CFR Part 63, Subpart DDDDD)**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters as specified in 40 CFR Part 63, Subparts A and DDDDD, as they apply to each boiler and process heater at the Detroit Refinery.[2] **(40 CFR Part 63, Subparts A and DDDDD)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGCOLDCLEANERS-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: EUNEWCOLDCLEANERS-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than 5% by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**

2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:
   a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(h))**
   b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(r)(iv))**

2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**

3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**

4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**

5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 °F, then the cold cleaner must comply with at least one of the following provisions:
   a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**

b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**
c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**

2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**
   a. A serial number, model number, or other unique identifier for each cold cleaner.
   b. The date the unit was installed, manufactured or that it commenced operation.
   c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(h).
   d. The applicable Rule 201 exemption.
   e. The Reid vapor pressure of each solvent used.
   f. If applicable, the option chosen to comply with Rule 707(2).

3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**

4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20%, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

FGRULE290-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 290.

Emission Unit: EUTANK15-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. Each emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. **(R 336.1290(a)(i))**

2. Each emission unit that the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively, and all the following criteria listed below are met: **(R 336.1290(a)(ii))**
   a. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 1,000 or 500 pounds per month, respectively. **(R 336.1290(a)(ii)(A))**
   b. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 microgram per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(a)(ii)(B))**
   c. For carcinogenic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(a)(ii)(C))**
   d. The emission unit shall not emit any air contaminants, excluding non-carcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. **(R 336.1290(a)(ii)(D))**

3. Each emission unit that emits only noncarcinogenic particulate air contaminants and other air contaminants that are exempted under Rule 290(a)(i) and/or Rule 290(a)(ii), if all of the following provisions are met: **(R 336.1290(a)(iii))**
   a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have an exhaust gas flow rate more than 30,000 actual cubic feet per minute. **(R 336.1290(a)(iii)(A))**
   b. The visible emissions from the emission unit are not more than 5% opacity in accordance with the methods contained in Rule 303. **(R 336.1290(a)(iii)(B))**
   c. The initial threshold screening level for each particulate air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. **(R 336.1290(a)(iii)(C))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The provisions of Rule 290 apply to each emission unit that is operating pursuant to Rule 290. **(R 336.1290)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall maintain records of the following information for each emission unit for each calendar month using the methods outlined in the DEQ, AQD Rule 290, Permit to Install Exemption Record form (EQP 3558) or an alternative format that is approved by the AQD District Supervisor. **(R 336.1213(3))**
   a. Records identifying each air contaminant that is emitted. **(R 336.1213(3))**
   b. Records identifying if each air contaminant is controlled or uncontrolled. **(R 336.1213(3))**
   c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic. **(R 336.1213(3))**
   d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is being emitted under the provisions of Rules 290(a)(ii) and (iii). **(R 336.1213(3))**
   e. Material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and Rule 290. **(R 336.1213(3), R 336.1290(c))**

2. The permittee shall maintain an inventory of each emission unit that is exempt pursuant to Rule 290. This inventory shall include the following information. **(R 336.1213(3))**
   a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit. **(R 336.1290(b), R 336.1213(3))**
   b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. **(R 336.1213(3))**

3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. **(R 336.1213(3))**

See Appendix 4-S1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

FGTIER3-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

These emission units and flexible groups used the hybrid test for PSD applicability for the Tier 3 Fuels Project. ~~Permit: 118-15~~

Emission Units: EU08-GOHTCHARHTR-S1, EU08-GOHTCHARHTR2-S1, EU08-GOHT-S1, EU71-H2HTR-S1, EU71-H2STEAMSYS-S1, EU42-43SULRECOV-S1, EU72-SULRBLOCK2-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Before beginning actual construction of the Tier 3 Fuels Project, the permittee shall document and maintain a record of the following information: **(R 336.2818(3)(a), R 336.2818(3)(f)(ii)**
    a. A description of the project.
    b. Identification of the emissions unit or units whose emissions of a regulated new major source review pollutant may be affected by the project.
    c. A description of the applicability test used to determine that the project is not a major modification for any regulated new source review pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under R 336.2801(ll)(ii)(C) and an explanation for why such amount was excluded, and any netting calculations, if applicable.

2. Before beginning actual construction of the Tier 3 Fuels Project, the permittee shall document and maintain a record of the following information: **(R 336.2902(6)(a))**
    a. A description of the project.

b. Identification of the emissions unit or units whose emissions of a regulated new major source review pollutant may be affected by the project.
c. A description of the applicability test used to determine that the project is not a major modification for any regulated new source review pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under R 336.2901(dd)(ii)(C) and an explanation for why such amount was excluded, and any netting calculations, if applicable.

3. The permittee shall calculate and keep records of the annual emissions of SO_2 from FGTIER3-S1 described in Appendix 4G-S1, in tons per calendar year. Calculations and record keeping shall begin upon startup of EU08-GOHTCHARHTR2-S1 or the new reactor in EU08-GOHT-S1, whichever occurs first and shall continue for five (5) years. (R 336.2902(6)(c))

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the date of completion of the activity. **(R 336.1201(7)(a))**

2. The permittee shall submit records of the annual emission of SO_2 from FGTIER3-S1 described in Appendix 4G-S1, in tons per calendar year, to the AQD Permit Section Supervisor within 60 days following the end of each reporting year if both the following occur:
a. The calendar year actual emission of SO_2 exceed the baseline actual emissions (BAE) by a significant amount, and
b. The calendar year actual emissions differ from the pre-construction projection. The pre-construction projection is the sum of the projected actual emissions from each existing emission unit and the potential emissions from each new emission unit included in the Hybrid Applicability Test used for FGTIER3-S1.

The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to VI.3, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projection). **(R 336.2902(6)(e))**

See Appendix 4G-S1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FGTIER3SO2-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

These emission units will show that there is no increase in sulfur dioxide emissions due to the Tier 3 Fuels project. ~~Permit:118-15~~

Emission Units: EU08-GOHTCHARHTR-S1, EU08-GOHTCHARHTR2-S1, EU11-FCCU-S1, EU71-H2HTR-S1, EU42-43SULRECOV-S1, EU72-SULRBLOCK2-S1

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. SO_2	88.0 tpy[3]	Annual rolling average as determined at the end of each calendar month	FGTIER3SO2-S1	SC VI.1	R 336.1201(3)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall calculate and keep records of the annual emissions of SO_2 from FGTIER3SO2-S1 described in Appendix 4H-S1, in tons per calendar year. Calculations and record keeping shall begin upon startup of EU08-GOHTCHARHTR2-S1 or the new reactor in EU08-GOHT-S1, whichever occurs first.[3] **(R 336.1201(3))**

VII. REPORTING

1. The permittee shall submit records of the annual emission of SO_2 from FGTIER3SO2-S1 described in Appendix 4H-S1, in tons per calendar year, to the AQD Permit Section Supervisor within 60 days following the end of each reporting year. Reporting shall begin upon startup of EU08-GOHTCHARHTR2-S1 or the new reactor in EU08-GOHT-S1, whichever occurs first, and continue for five (5) years. The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to VI.1, and any other information the owner or operator wishes to include.[3] **(R 336.1201(3))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[3]This condition is included at the request of the permittee.

FGPVTANKS-S4
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Pressure vessels for the storage of petroleum liquids with a true vapor pressure greater than 1.5 psia

Emission Units: EU22-V88-S4, EU22-V89-S4, EU22-V90-S4, EU22-V91-S4, EU22-V92-S4, EU22-V93-S4, EU22-V94-S4, EU22-V95-S4, EUTANK87-S4, EUTANK96-S4, EUTANKS176-S4

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not store any organic compound having a true vapor pressure of more than 1.5 psia at actual conditions in any of the following tanks unless the tank is a pressure tank capable of maintaining working pressures sufficient to prevent organic vapor or gas loss to the atmosphere at all times, except under emergency conditions.

Tanks	Underlying Applicable Requirements
EUTANKS87-S4, EUTANKS96-S4, EUTANK176-S4	R 336.1604(1)(a), R 336.1605(1)(a)
EU22-V88-S4, EU22-V89-S4, EU22-V90-S4, EU22-V91-S4, EU22-V92-S4, EU22-V93-S4, EU22-V94-S4, EU22-V95-S4	R 336.1702(d)

2. All openings in the following tanks shall be equipped with covers, lids or seals such that the covers, lids or seals are in a closed position at all times, except when in actual use. **(R 336.1605(2))**

Tanks	Underlying Applicable Requirements
EUTANKS87-S4, EUTANKS96-S4, EUTANK176-S4	R 336.1604(2), R 336.1605(2)
EU22-V88-S4, EU22-V89-S4, EU22-V90-S4, EU22-V91-S4, EU22-V92-S4, EU22-V93-S4, EU22-V94-S4, EU22-V95-S4	R 336.1702(d)

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3)**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3)**

1. The permittee shall monitor and record the pressure of each tank in FGPVTANKS-S4, on a daily basis. **(R 336.1213(3), R 336.1702(a))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall implement a program to monitor at least 90 percent of the flanges and connectors in gas/vapor and light liquid VOC service in FGPVTANKS-S4. The program shall meet the following requirements. **(R 336.1205, R 336.1225, R 336. 1702(a))**
   a. Monitoring shall be conducted on a quarterly basis, using test methods and procedures described in Appendix 5-S1 of Renewable Operating Permit No. MI-ROP-A9831-2012c.
   b. A leak shall be defined as an instrument reading of 500 ppm or greater, as specified in NSPS Subpart VVa.
   c. Flanges and connectors may be excluded from the monitoring program if they are "unsafe to monitor" as defined in 40 CFR 60.482-7(g)(1), or "difficult to monitor" as defined in 40 CFR 60.482-7(h)(1).
   d. Permittee shall maintain records utilizing the procedures in Appendix 4-S1 of Renewable Operating Permit No. MI-ROP-A9831-2012c.

2. Within 180 days after the last tank in FGPVTANKS-S4 has been placed into service, the permittee shall remove tanks 22T80, 22T81, 22T82, 22T83, 22T84, 22T89, 22T90, 22T91, 22T92, 22T94, 22T95, 22T98, 22T99, 22T190, and 22T191 from service.[3] (R 336.1201(3))

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[3]This condition is included at the request of the permittee.

E-S1. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that the requirements identified in the table below are not applicable to the specified emission unit(s) and/or flexible group(s). This determination is incorporated into the permit shield provisions set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii). If the permittee makes a change that affects the basis of the non-applicability determination, the permit shield established as a result of that non-applicability decision is no longer valid for that emission unit or flexible group.

Emission Unit/Flexible Group ID	Non-Applicable Requirement	Justification
FGPROCUNITS-S1 FGGROUP2-S1 FGIFRTANKS-S1 FGEFRTANKS-S1	R 336.1628	Emission of VOC compounds from components of existing process equipment used in manufacturing synthetic organic chemicals and polymers; monitoring program. The petroleum refinery for which this ROP applies is covered under the equivalent requirements of R336.1622 and 40 CFR Part 60, Subparts GGG, GGGa, VV, and VVa.
EU22-MELVLPGRAILRACK-S14 EU22-ASPHLOAD-S1 EU99-LPGLOADRACK-S1	40 CFR Part 60, Subpart XX	Standard of Performance for Bulk Gasoline Terminals. This standard is not applicable to Section 1, the refinery, but is applicable to the adjacent terminal, Section 2.
FGPROCUNITS-S1 FGGROUP2-S1 FGIFRTANKS-S1 FGEFRTANKS-S1	40 CFR Part 60, Subpart RRR	VOC compounds emissions from synthetic organic chemicals manufacturing industry (SOCMI) reactor processes. The refinery is regulated by equivalent requirements of 40 CFR Part 60, Subparts GGG, GGGa, VV, VVa and 40 CFR Part 63, Subpart CC.
FGPROCUNITS-S1 FGGROUP2-S1 FGIFRTANKS-S1 FGEFRTANKS-S1	40 CFR Part 63, Subpart J and where applicable Ja	National Emission Standard for Equipment Leaks of Benzene. The refinery is regulated by equivalent requirements of 40 CFR Part 60, Subparts GGG, GGGa, VV, and VVa; 40 CFR Part 63, Subpart CC and 40 CFR Part 61, Subpart F.
FGPROCUNITS-S1 FGGROUP2-S1 FGIFRTANKS-S1 FGEFRTANKS-S1	40 CFR Part 63, Subpart F	Organic Hazardous Air pollutants from SOCMI industry. The refinery's equivalent requirements are 40 CFR Part 60, Subparts GGG, GGGa, VV, and VVa; 40 CFR Part 63, Subpart CC.
EU22-MELVLPGRAILRACK-S14 EU22-ASPHLOAD-S1 EU99-LPGLOADRACK-S1	40 CFR Part 63, Subpart R	This requirement applies to Section 2, Light Products Terminal, only
EU38-ROUGETERMNL-S1	40 CFR Part 63, Subpart Y	All Marine tank vessels cargo/products have Reid vapor pressure of less than 1.5 psi and thus, produce emissions less than regulated.
EU38-ROUGETERMNL-S1	40 CFR Part 63, Subpart CC, Section (c)(6)	The vapor pressure of any materials the refinery loads on Marine tank vessels is low enough that the emissions released are insignificant and much less than the threshold amount for regulation.

APPENDICES

Appendix 1-S1: Abbreviations and Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division
acfm	Actual cubic feet per minute
BACT	Best Available Control Technology
BTU	British Thermal Unit
°C	Degrees Celsius
CAA	Federal Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emission Monitoring
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COM	Continuous Opacity Monitoring
department	Michigan Department of Environmental Quality
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
EPA	United States Environmental Protection Agency
EU	Emission Unit
°F	Degrees Fahrenheit
FG	Flexible Group
GACS	Gallon of Applied Coating Solids
gr	Grains
gpy	Gallons Per Year
HAP	Hazardous Air Pollutant
Hg	Mercury
Hr	Hour
HP	Horsepower
H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure *
ID	Identification (Number)
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
Lb	Pound
M	Meter
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MDEQ	Michigan Department of Environmental Quality
Mg	Milligram
Mm	Millimeter
MM	Million
MSDS	Material Safety Data Sheet
MW	Megawatts
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NMOC	Non-methane Organic Compounds
NOx	Oxides of Nitrogen
NSPS	New Source Performance Standards
NSR	New Source Review
PM	Particulate Matter
PM	Particulate Matter less than 10 microns in diameter
pph	Pound per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
PS	Performance Specification
PSD	Prevention of Significant Deterioration
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
PeTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
scf	Standard cubic feet
sec	Seconds
SCR	Selective Catalytic Reduction
SO_2	Sulfur Dioxide
SRN	State Registration Number
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
VE	Visible Emissions
VOC	Volatile Organic Compounds
yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 pounds per square inch gauge (psig).

Appendix 2-S1. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. **(R 336.1213(4)(a), R 336.1119(a)(ii))**

New Source Review Consent Decree United States of America (Plaintiff) and County of Wayne, Michigan, State of Louisiana, State of Minnesota (Plaintiff-Intervenors) Vs. Marathon Ashland Petroleum LLC (Defendant) (Civil No. 01-40119),lodged May 11, 2001 and entered August 28, 2001, has a dated compliance plan which the source has demonstrated meeting on a timely basis.

Appendix 3-S1. Monitoring Requirements

3.A. The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGHEATERS-S1.

NSPS Subpart J

~~1.~~3. For fuel gas combustion devices subject to 40 CFR 60.104(a)(1), an instrument for continuously monitoring and recording the concentration by volume (dry basis, zero % excess air) of SO2 emission into the atmosphere (except where an H2S monitor is installed) **(40 CFR 60.105(a)(3))**
   a. The span values for this monitor are 50 ppm SO2 and 10% Oxygen (O2).
   b. The SO2 monitoring level equivalent to the H2S standard under 40 CFR 60.104(a) shall be 20 ppm (dry basis, zero % excess air)
   c. The performance evaluations for this SO_2 monitor under 40 CFR 60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations. Method 6 samples shall be taken at a flow rate of approximately 2 liters/min for at least 30 minutes. The relative accuracy limit shall be 20% or 4 ppm, whichever is greater, and the calibration drift limit shall be 5% of the established span value.
   d. Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location (i.e., after one of the combustion devices), if monitoring at this location accurately represents the S_2 emissions into the atmosphere from each of the combustion devices. **(40 CFR 60.105(a)(3)(i-iv))**

~~2.~~4. In place of the SO2 monitor in paragraph § 60.105(a)(3), an instrument for continuously monitoring and recording the concentration of H2S (dry basis) in the fuel gases before being burned in any fuel gas combustion device may be used.
   a. The span for this instrument is 425 mg/dscm H2S.
   b. Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if the monitoring at this location accurately represents the concentration of H2s in the fuel gas being burned.
   c. The performance evaluations for this H2S monitor under 40 CFR 60.13(c) shall use Performance Specification 7. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations. **(40 CFR 60.105(a)(4)(i-iii))**

3.B. The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGPROCVENTS-S1

Refinery MACT 1- Monitoring Miscellaneous Process Vents (40 CFR Part 63, Subpart CC)

1. Except as provided in paragraph 40 CFR 63.644(b), permittee, for the Group 1 miscellaneous process vent that uses a combustion device to comply with the requirements in 40 CFR 63.643(a) shall install the monitoring equipment specified in paragraph 40 CFR 63.644(a)(1-4), depending on the type of combustion device used. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately. **(40 CFR 63.644(a))**
   a. Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required. **(40 CFR 63.644(a)(1))**
      i. Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs. **(40 CFR 63.644(a)(1)(i))**
      ii. Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream before and after the catalyst bed. **(40 CFR 63.644(a)(1)(ii))**
   b. Where a flare is used, a device (including but not limited to a thermocouple, an ultraviolet beam sensor, or an infrared sensor) capable of continuously detecting the presence of a pilot flame is required. **(40 CFR 63.644(a)(2))**
   c. Any boiler or process heater with a design heat input capacity greater than or equal to 44 megawatt or any boiler or process heater in which all vent streams are introduced into the flame zone is exempt from monitoring. **(40 CFR 63.644(a)(3))**
   d. Any boiler or process heater less than 44 megawatts design heat capacity where the vent stream is not introduced into the flame zone is required to use a temperature monitoring device in the firebox equipped with a continuous recorder. **(40 CFR 63.644(a)(4))**
2. The permittee for the Group 1 miscellaneous process vent may request approval to monitor parameters other than those listed in paragraph 40 CFR 63.644(a). The request shall be submitted according to the procedures specified in 40 CFR 63.655(h). Approval shall be requested if the permittee: **(40 CFR 63.644(b))**
   a. Uses a control device other than an incinerator, boiler, process heater, or flare; or **(40 CFR 63.644(b)(1))**
   b. Uses one of the control devices listed in paragraph 40 CFR 63.644(a), but seeks to monitor a parameter other than those specified in paragraph 40 CFR 63.644(a). **(40 CFR 63.644(b)(2))**
3. The permittee for the Group 1 miscellaneous process vent using a vent system that contains bypass lines that could divert a vent stream away from the control device used to comply with paragraph 40 CFR 63.644(a) shall comply with either paragraph 40 CFR 63.644(c)(1 or 2). Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, pressure relief valves needed for safety reasons, and equipment subject to 40 CFR 63.648 are not subject to 40 CFR 64.644(c). **(40 CFR63.644(c))**
   a. Install, calibrate, maintain, and operate a flow indicator that determines whether a vent stream flow is present at least once every hour. Records shall be generated as specified in 40 CFR 63.655(h) and (i). The flow indicator shall be installed at the entrance to any bypass line. **(40 CFR63.644(c)(1))**
   b. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line. **(40 CFR63.644(c)(2))**
4. The permittee shall establish a range that ensures compliance with the emissions standard for each parameter monitored under paragraphs 40 CFR 63.644(a and b). In order to establish the range, the information required in 40 CFR 63.655(f)(3) shall be submitted in the Notification of Compliance Status report. **(40 CFR63.644(d))**
5. The permittee shall operate the control device in a manner consistent with the minimum and/or maximum operating parameter value or procedure required to be monitored under paragraphs 40 CFR 63.644(a and b). Operation of the control device in a manner that constitutes a period of excess emissions, as defined in 40 CFR 63.655(g)(6), or failure to perform procedures required by 40 CFR 63.644 shall constitute a violation of the applicable emission standard of 40 CFR Part 63, Subpart CC. **(40 CFR63.644(e))**

3.C. The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in Tables EUNSPSQQQ-S1.

NSPS Subpart QQQ – Monitoring of VOC Emissions from Petroleum Refinery Wastewater Systems

1. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment, unless alternative monitoring procedures or requirements are approved for that facility by the EPA Administrator. **(40 CFR 60.695(a))**
   a. Where a thermal incinerator is used for VOC emission reduction, a temperature monitoring device equipped with acontinuous recorder shall be used to measure the temperature of the gas stream in the combustion zone of the incinerator. The temperature monitoring device shall have an accuracy of ±1% of the temperature being measured, in °C or ±0.5 °C (±1.0 °F), whichever is greater. **(40 CFR 60.695(a)(1))**
   b. Where a catalytic incinerator is used for VOC emission reduction, temperature monitoring devices, each equipped with a continuous recorder shall be used to measure the temperature in the gas stream immediately before and after the catalyst bed of the incinerator. The temperature monitoring devices shall have an accuracy of ±1% of the temperature being measured in °C or ±0.5 °C (±0.9 °F), whichever is greater. **(40 CFR 60.695(a)(2))**
   c. Where a carbon adsorber is used for VOC emissions reduction, a monitoring device that continuously indicates and records the VOC concentration level or reading of organics in the exhaust gases of the control device outlet gas stream or inlet and outlet gas stream shall be used. **(40 CFR 60.695(a)(3))**
      i. For a carbon adsorption system that regenerates the carbon bed directly onsite, a monitoring device that continuously indicates and records the volatile organic compound concentration level or reading of organics in the exhaust gases of the control device outlet gas stream or inlet and outlet gas stream shall be used. **(40 CFR 60.695(a)(3)(i))**
      ii. For a carbon adsorption system that does not regenerate the carbon bed directly onsite in the control device (e.g. a carbon canister), the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system shall be monitored on a regular schedule, and the existing carbon shall be replaced with fresh carbon immediately when carbon breakthrough is indicated. The device shall be monitored on a daily basis or at intervals no greater than 20% of the design carbon replacement interval, whichever is greater. As an alternative to conducting this monitoring, a permittee may replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system. **(40 CFR 60.695(a)(3)(ii))**
   d. Where a flare is used for VOC emission reduction, the permittee shall comply with the monitoring requirements of 40 CFR 60.18(f)(2). [The presence of a flare pilot flame shall be monitored.] **(40 CFR 60.695(a)(4))**
2. Where a VOC recovery device other than a carbon adsorber is used to meet the requirements specified in 40 CFR 60.692-5(a), the permittee shall provide to the Administrator information describing the operation of the control device and the process parameter(s) that would indicate proper operation and maintenance of the device. The Administrator may request further information and will specify appropriate monitoring procedures or requirements. **(40 CFR 60.695(b)**
3. An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications. **(40 CFR 60.695(c))**

3.D. NO_X, SO_2, O_2 and CO Monitoring - Continuous Emission Monitoring System (CEMS) Requirements

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.
2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.
3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CEMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
NO_X	2
SO_2	2
O_2	3
CO	4 or 4A*

*PS 4A applies to only EU08-GOHTCHARHTR2-S1

6. ~~5.~~ The span value shall be 2.0 times the lowest emission standard, or as specified in the federal regulations, or as specified by the conditions of this ROP.
7. For EU08-GOHTCHARHTR2-S1, the span value for NOx shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
8. For EU08-GOHTCHARHTR2-S1, the span value for CO shall be 50 ppmv.
9. ~~6.~~ The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2 of Appendix B to 40 CFR Part 60.
10. ~~7.~~ Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F).
11. ~~8.~~ In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
    a. A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
    b. A report of all periods of CEMS downtime and corrective action.
    c. A report of the total operating time of the emission unit during the reporting period.
    d. A report of any periods that the CEMS exceeds the instrument range.
    e. If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

    The permittee shall keep all monitoring data on file for a period of at least five years and make them available to the AQD upon request.

Appendix 4-S1. Recordkeeping

4.A. The permittee shall use the following approved formats and procedures for the recordkeeping requirements identified and referenced in Tables FGGROUP2-S1, FGIFRTANKS-S1, and FGEFRTANKS-S1. Alternative formats must be approved by the AQD District Supervisor.

MACT 1/Hazardous Organic NESHAPS (HON) Storage Tank Recordkeeping Requirements (40CFR Part 63, Subpart CC)

1. The permittee shall keep records as described in paragraph 40 CFR 63.655(i). **(40 CFR 63.655(e))**
2. The permittee shall keep the records specified in 40 CFR 63.123 except as specified in paragraphs 40 CFR 63.655(i)(1)(i -iv). **(40 CFR 63.655(i))**
3. The permittee for each Group 1 or Group 2 storage vessel shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 or Group 2 status and is in operation. **(40 CFR 63.123(a), 40 CFR 63.655(i))**
4. The permittee shall keep a record that each inspection required by 40 CFR 63.120(a) was performed. **(40 CFR 63.123(c), 40 CFR 63.655(i))**
5. The permittee who elects to utilize an extension in emptying a storage vessel in accordance with 40 CFR 63.120(a)(4), 40 CFR 63.120(b)(7)(ii), or 40 CFR 63.120(b)(8) shall keep in a readily accessible location, the

documentation specified in 40 CFR 63.120(a)(4), 40 CFR 63.120(b)(7)(ii), or 40 CFR 63.120(b)(8), as applicable. **(40 CFR 63.123(g), 40 CFR 63.655(i))**

6. The permittee who uses the by-pass provisions of 40 CFR 63.119(f)(3) shall keep in a readily accessible location the records specified in paragraphs 40 CFR 63.123(h)(1 - 3) of this section. **(40 CFR 63.123(h))**
   a. The reason it was necessary to by-pass the process equipment or fuel gas system; **(40 CFR 63.123(h)(1))**
   b. The duration of the period when the process equipment or fuel gas system was bypassed; **(40 CFR 63.123(h)(2))**
   c. Documentation or certification of compliance with the applicable provisions of 40 CFR 63.119(f)(3)(i-iii). **(40 CFR 63.123(h)(3))**
7. The permittee shall retain records of any data, assumptions, and procedures used to make the determination that a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4% for existing sources or 2% for new sources. **(40 CFR 63.655(i)(1)(iv))**
8. The permittee, if required to report the results of performance tests under paragraphs 40 CFR 63.655(f) and 40 CFR 63.655(g)(7) shall retain a record of all reported results as well as a complete test report, as described in paragraph 40 CFR 63.655(f)(2)(ii) for each emission point tested. **(40 CFR 63.655(i)(2))**
9. The permittee shall retain all other information required to be reported under paragraphs 40 CFR 63.655(a-h) for 5 years. **(40 CFR 63.655(i)(4))**
10. The permittee shall keep records describing the results of each seal gap measurement made in accordance with 40 CFR 63.120(b). The record shall include the date of the measurement, the raw data obtained in the measurement and the calculations described in 40 CFR 63.120(b)(3 and 4). **(40 CFR 63.123(d), 40 CFR 63.655(i))**

4.B. The permittee shall use the following approved formats and procedures for the recordkeeping requirements identified and referenced in Tables FGEFRTANKS-S1 and FGIFRTANKS-S1. Alternative formats must be approved by the AQD District Supervisor.

NSPS Subpart Kb – Internal and External Floating Roof Tanks Recordkeeping (40 CFR 60, Subpart Kb)

1. The permittee of each storage vessel as specified in 40 CFR 60.112b(a) shall keep records as required by paragraphs 40 CFR 60.115b(a, b, or c) .depending upon the control equipment installed to meet the requirements of 40 CFR 60.112b. **(40 CFR 60.115b)**
2. The permittee shall keep copies of all reports and records required by 40 CFR 60.115b, except for the record required by 40 CFR 60.115b(c)(1), for at least 5 years. The record required by 40 CFR 60.115b(c)(1) will be kept for the life of the control equipment. **(R 336.1213(3)(b)(ii), 40 CFR 60.115b)**
3. After installing control equipment in accordance with 40 CFR 60.112b(a)(1) (fixed roof and internal floating roof), the permittee shall meet the following requirements: **(40 CFR 60.115b(a))**
   a. Keep a record of each inspection performed as required by 40 CFR 60.113b(a)(1-4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). **(40 CFR 60.115b(a)(2))**
4. The permittee for each storage vessel as specified in 40 CFR 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. **(40 CFR 60.116b(b))**

   Except as provided in paragraph 40 CFR 60.116b(g) the permittee for each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. **(40 CFR 60.116b(d))**
5. Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below: **(40 CFR 60.116b(e))**
   a. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. **(40 CFR 60.116b(e)(1))**

b. For crude oil or refined petroleum products the vapor pressure may be obtained by the following: **(40 CFR 60.116b(e)(1)(2))**
   i. Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference see 40 CFR 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). **(40 CFR 60.116b(e)(2)(i))**
   ii. The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa. **(40 CFR 60.116b(e)(2)(ii))**

c. For other liquids, the vapor pressure: **(40 CFR 60.116b(e)(3))**
   i. May be obtained from standard reference texts, or
   ii. Determined by ASTM Method D2879-83, 96, or 97 (incorporated by reference-see 40 CFR 60.17); or
   iii. Measured by an appropriate method approved by the Administrator; or
   iv. Calculated by an appropriate method approved by the Administrator. **(40 CFR 60.116b(e)(3)(i-iv))**

6. The permittee for each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements. **(40 CFR 60.116b(f))**
   a. Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph 40 CFR 60.116b(e). **(40 CFR 60.116b(f)(1))**
   b. For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in 40 CFR 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods: **(40 CFR 60.116b(f)(2)(i-iii))**
      i. ASTM Method D2879-83, 96, or 97 (incorporated by reference--see 40 CFR 60.17); or
      ii. ASTM Method D323-82 or 94 (incorporated by reference--see 40 CFR 60.17); or
      iii. As measured by an appropriate method as approved by the Administrator.

4.C. The permittee shall use the following approved formats and procedures for the recordkeeping requirements identified and referenced in Table FGPROCVENTS-S1. Alternative formats must be approved by the AQD District Supervisor.

Refinery MACT 1 – Miscellaneous Process Vents, Recordkeeping

1. The permittee if required to report the results of performance tests under paragraphs 40 CFR 63.655(f) and 40 CFR 63.655(g)(7) shall retain a record of all reported results as well as a complete test report, as described in 40 CFR 63.655(f)(2)(ii) for each emission point tested. **(40 CFR 63.655(i)(2))**
2. The permittee if required to continuously monitor operating parameters under 40 CFR 63.644 for miscellaneous process vents or under 40 CFR 63.652 shall keep the records specified in paragraphs 40 CFR 63.655(i)(3)(i-v) unless an alternative recordkeeping system has been requested and approved under paragraph 40 CFR 63.655(h). **(40 CFR 63.655(i)(3))**
   a. The monitoring system shall measure data values at least once every hour. **(40 CFR 63.655(i)(3)(i))**
   b. The permittee shall record either: **(40 CFR 63.655(i)(3)(ii))**
      i. Each measured data value; or **(40 CFR 63.655(i)(3)(ii)(A))**
      ii. Block average values for 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values. **(40 CFR 63.655(i)(3)(ii)(B))**
   c. Daily average values of each continuously monitored parameter shall be calculated for each operating day and retained for 5 years except as specified in paragraph 40 CFR 63.655(i)(3)(iv). **(40 CFR 63.655(i)(3)(iii))**
      i. The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day. The average shall cover a 24-hour period if operation is continuous or the number of hours of operation per day if operation is not continuous. **(40 CFR 63.655(i)(3)(iii)(A))**

ii. The operating day shall be the period defined in the Notification of Compliance Status report. It may be from midnight to midnight or another daily period. **(40 CFR 63.655(i)(3)(iii)(B))**

d. If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status report, the permittee may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that day. For these days, the records required in paragraph 40 CFR 63.655(i)(3)(ii) shall also be retained for 5 years. **(40 CFR 63.655(i)(3)(iv))**

e. Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in any average computed under 40 CFR Part 63, Subpart CC. Records shall be kept of the times and durations of all such periods and any other periods during process or control device operation when monitors are not operating. **(40 CFR 63.655(i)(3)(v))**

3. All other information required to be reported under paragraphs 40 CFR 63.655(a-h) shall be retained for 5 years. **(40 CFR 63.655(i)(4))**

4.D. The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced and identified in EUNSPSQQQ-S1. Alternative formats must be approved by the AQD District Supervisor.

NSPS Subpart QQQ – VOC Emissions from Refinery Wastewater Systems, Recordkeeping Requirements

1. The permittee shall comply with the recordkeeping requirements of 40 CFR 60.697. All records shall be retained for a period of five years after being recorded unless otherwise noted. **(40 CFR 60.697(a))**
2. For individual drain systems subject to 40 CFR 60.692-2, the location, date, and corrective action shall be recorded for each drain when the water seal is dry or otherwise breached, when a drain cap or plug is missing or improperly installed, or other problem is identified that could result in VOC emissions, as determined during the initial and periodic visual or physical inspection. **(40 CFR 60.697(b)(1))**
   a. For junction boxes subject to 40 CFR 60.692-2, the location, date, and corrective action shall be recorded for inspections required by 40 CFR 60.692-2(b) when a broken seal, gap, or other problem is identified that could result in VOC emissions. **(40 CFR 60.697(b)(2))**
   b. For sewer lines subject to 40 CFR 60.692-2 and 40 CFR 60.693-1(e), the location, date, and corrective action shall be recorded For inspections required by 40 CFR 60.692-2(c) and 40 CFR 60.693-1(e) when a problem is identified that could result in VOC emissions. **(40 CFR 60.697(b)(3))**
3. For oil-water separators subject to 40 CFR 60.692-3, the location, date, and corrective action shall be recorded for inspections required by 40 CFR 60.692-3(a) when a problem is identified that could result in VOC emissions. **(40 CFR 60.697(c))**
4. For closed vent systems subject to 40 CFR 60.692-5 and completely closed drain systems subject to 40 CFR 60.693-1, the location, date, and corrective action shall be recorded for inspections required by 40 CFR 60.692-5(e) during which detectable emissions are measured or a problem is identified that could result in VOC emissions. **(40 CFR 60.697(d))**
5. If an emission point cannot be repaired or corrected without a process unit shutdown, the expected date of a successful repair shall be recorded. **(40 CFR 60.697(e)(1))**
   a. The reason for the delay as specified in 40 CFR60.692-6 shall be recorded if an emission point or equipment problem is not repaired or corrected in the specified amount of time. **(40 CFR 60.697(e)(2))**
   b. The signature of the owner or operator (or designee) whose decision it was that repair could not be effected without refinery or process shutdown shall be recorded. **(40 CFR 60.697(e)(3))**
   c. The date of successful repair or corrective action shall be recorded. **(40 CFR 60.697(e)(4))**
6. A copy of the design specifications for all equipment used to comply with the provisions of 40 CFR Part 60, Subpart QQQ shall be kept for the life of the source in a readily accessible location. **(40 CFR 60.697(f)(1))**
   a. The following information pertaining to the design specifications shall be kept. **(40 CFR 60.697(f)(2))**
      i. Detailed schematics, and piping and instrumentation diagrams. **(40 CFR 60.697(f)(2)(i))**
      ii. The dates and descriptions of any changes in the design specifications. **(40 CFR 60.697(f)(2)(ii))**
   b. The following information pertaining to the operation and maintenance of closed drain systems and closed vent systems shall be kept in a readily accessible location. **(40 CFR 60.697(f)(3))**
      i. Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions shall be kept for the life of the facility. This documentation is to include a general description of the gas streams that enter the control device, including flow and volatile organic

compound content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816°C (1,500°F) is used to meet the 95% requirement, documentation that those conditions exist is sufficient to meet the requirements of this paragraph. **(40 CFR 60.697(f)(3)(i))**

ii. For a carbon adsorption system that does not regenerate the carbon bed directly onsite in the control device such as a carbon canister, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule. **(40 CFR 60.697(f)(3)(ii))**

iii. Periods when the closed vent systems and control devices required in Sec. 60.692 are not operated as designed, including periods when a flare pilot does not have a flame shall be recorded and kept for 5 years after the information is recorded. **(40 CFR 60.697(f)(3)(iii))**

iv. Dates of startup and shutdown of the closed vent system and control devices required in 40 CFR 60.692 shall be recorded and kept for 5 years after the information is recorded. **(40 CFR 60.697(f)(3)(iv))**

v. The dates of each measurement of detectable emissions required in 40 CFR 60.692, 40 CFR 60.693, or 40 CFR 60.692-5 shall be recorded and kept for 5 years after the information is recorded. **(40 CFR 60.697(f)(3)(v))**

vi. The background level measured during each detectable emissions measurement shall be recorded and kept for 5 years after the information is recorded. **(40 CFR 60.697(f)(3)(vi))**

vii. The maximum instrument reading measured during each detectable emission measurement shall be recorded and kept for 5 years after the information is recorded. **(40 CFR 60.697(f)(3)(vii))**

viii. The permittee, if uses a thermal incinerator, shall maintain continuous records of the temperature of the gas stream in the combustion zone of the incinerator and records of all 3-hour periods of operation during which the average temperature of the gas stream in the combustion zone is more than 28°C (50°F) below the design combustion zone temperature, and shall keep such records for 5 years after the information is recorded. **(40 CFR 60.697(f)(3)(viii))**

ix. The permittee if uses a catalytic incinerator shall maintain continuous records of the temperature of the gas stream both upstream and downstream of the catalyst bed of the incinerator, records of all 3-hour periods of operation during which the average temperature measured before the catalyst bed is more than 28°C (50°F) below the design gas stream temperature, and records of all 3-hour periods during which the average temperature difference across the catalyst bed is less than 80% of the design temperature difference, and shall keep such records for 5 years after the information is recorded. **(40 CFR 60.697(f)(3)(ix))**

x. The permittee if uses a carbon adsorber shall maintain continuous records of the VOC concentration level or reading of organics of the control device outlet gas stream or inlet and outlet gas stream and records of all 3-hour periods of operation during which the average VOC concentration level or reading of organics in the exhaust gases, or inlet and outlet gas stream, is more than 20% greater than the design exhaust gas concentration level, and shall keep such records for 5 years after the information is recorded. **(40 CFR 60.697(f)(3)(x))**

A. The permittee if uses a carbon adsorber which is regenerated directly onsite shall maintain continuous records of the volatile organic compound concentration level or reading of organics of the control device outlet gas stream or inlet and outlet gas stream and records of all 3-hour periods of operation during which the average volatile organic compound concentration level or reading of organics in the exhaust gases, or inlet and outlet gas stream, is more than 20% greater than the design exhaust gas concentration level, and shall keep such records for 5 years after the information is recorded. **(40 CFR 60.697(f)(3)(x)(A))**

B. If a carbon adsorber that is not regenerated directly onsite in the control device is used, then the permittee shall maintain records of dates and times when the control device is monitored, when breakthrough is measured, and shall record the date and time that the existing carbon in the control device is replaced with fresh carbon. **(40 CFR 60.697(f)(3)(x)(B))**

7. If the permittee elects to install a tightly sealed cap or plug over a drain that is out of active service, the permittee shall keep for the life of a facility in a readily accessible location, plans or specifications which indicate the location of such drains. **(40 CFR 60.697(g))**

8. For stormwater sewer systems subject to the exclusion in 40 CFR 60.692-1(d)(1), the permittee shall keep for the life of the facility in a readily accessible location, plans or specifications which demonstrate that no wastewater from any process units or equipment is directly discharged to the stormwater sewer system. **(40 CFR 60.697(h))**
9. For ancillary equipment subject to the exclusion in 40 CFR 60.692-1(d)(2), the permittee shall keep for the life of a facility in a readily accessible location, plans or specifications which demonstrate that the ancillary equipment does not come in contact with or store oily wastewater. **40 CFR 60.697(i))**
10. For non-contact cooling water systems subject to the exclusion in 40 CFR 60.692-1(d)(3), the permittee shall keep for the life of the facility in a readily accessible location, plans or specifications which demonstrate that the cooling water does not contact hydrocarbons or oily wastewater and is not recirculated through a cooling tower. **(40 CFR 60.697(j))**

4.E. The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced and identified in FGPROCUNITS-S1. Alternative formats must be approved by the AQD District Supervisor.

40 CFR Part 60, Subparts VV and VVa and Subparts GGG and GGGa – NSPS Leak Detection And Repair Recordkeeping

1. The permittee shall comply with the recordkeeping requirements of 40 CFR 60.486 and 40 CFR 60.487, or 40 CFR 60.486a and 40 CFR 60.487a. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(a)(1), 40 CFR 60.486a(a)(1))**
2. The permittee who has more than one affected facility subject to the provisions of 40 CFR Part 60, Subpart VV or VVa may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility. **(40 CFR 60.592(e)), 40 CFR 60.592a(e), 40 CFR 60.486(a)(2), 40 CFR 60.486a(a)(2))**
3. For sources subject to 40 CFR Part 60, Subpart VVa, the permittee shall record the information specified in paragraphs 40 CFR 60.486a(a)(3)(i-v) for each monitoring event required by 40 CFR 60.482–2a; 40 CFR 60.482–3a; 40 CFR 60.482–7a; 40 CFR 60.482–8a; 40 CFR 60.482–11a; and 40 CFR 60.483–2a. **(40 CFR 60.592a(e), 40 CFR 60.486a(a)(3))**
   a. Monitoring instrument identification.
   b. Operator identification.
   c. Equipment identification.
   d. Date of monitoring.
   e. Instrument reading.
4. When each leak is detected as specified in 40 CFR 60.482-2; 40 CFR 60.482-3; 40 CFR 60.482-7; 40 CFR 60.482-8; and 40 CFR 60.483-2 or 40 CFR 60.482a-2; 40 CFR 60.482-3a; 40 CFR 60.482-7a; 40 CFR 60.482-8a; 40 CFR 60.482-11a; and 40 CFR 60.483-2a, the following requirements apply: **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(b), 40 CFR 60.486a(b))**
   a. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(b)(1), 40 CFR 60.486a(b)(1))**
   b. The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 60.482-7(c) and no leak has been detected in those 2 months. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(b)(2), 40 CFR 60.486a(b)(2))**
   c. For sources subject to 40 CFR Part 60, Subpart VVa, the identification on a connector may be removed after it has been monitored as specified in 40 CFR 60.482–11a(b)(3)(iv) and no leak has been detected during that monitoring. **(40 CFR 60.486a(b)(3))**
   d. The identification on equipment except on a valve, may be removed after it has been repaired. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(b)(3), 40 CFR 60.486a(b)(4))**
5. When each leak is detected as specified in 40 CFR 60.482-2, 40 CFR 60.482-3, 40 CFR 60.482-7, 40 CFR 60.482-8, and 40 CFR 60.483-2; or 40 CFR 60.482-2a, 40 CFR 60.482-3a, 40 CFR 60.482-7a, 40 CFR 60.482-8a, 40 CFR 60.482-11a, and 40 CFR 60.483-2a, the following information shall be recorded in a log and shall be kept for 5 years in a readily accessible location: **(R 336.1213(3)(b)(ii), 40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(c), 40 CFR 60.486a(c))**

a. For sources subject to 40 CFR Part 60, Subpart VV use paragraph (i) below and for sources subject to 40 CFR Part 60,Subpart VVa use paragraph (ii) below.
   i. The instrument and operator identification numbers and the equipment identification number. **(40 CFR 60.592(e), 40 CFR 60.486(c)(1))**
   ii. The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak. **(40 CFR 60.592a(e), 40 CFR 60.486a(c)(1))**
b. The date the leak was detected and the dates of each attempt to repair the leak. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(c)(2), 40 CFR 60.486a(c)(2))**
c. Repair methods applied in each attempt to repair the leak. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(c)(3), 40 CFR 60.486a(c)(3))**
d. For sources subject to 40 CFR Part 60, Subpart VV use paragraph (i) below and for sources subject to 40 CFR Part 60, Subpart VVa use paragraph (ii) below.
   i. "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR 60.485(a) after each repair attempt is equal to or greater than 10,000 ppm. **(40 CFR 60.592(e), 40 CFR 60.486(c)(4))**
   ii. Maximum instrument reading measured by Method 21 at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping. **(40 CFR 60.592a(e), 40 CFR 60.486a(c)(4))**
e. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(c)(5), 40 CFR 60.486a(c)(5))**
f. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown is not required to be recorded. Instead, the name of the person whose decision it was that a repair could not be effected without a process shutdown shall be recorded and retained for 5 years. **(R336.1213(3)(b)(ii), 40 CFR 63.655(d)(1)(i))**
g. The expected date of successful repair of the leak if a leak is not repaired within 15 days. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(c)(7), 40 CFR 60.486a(c)(7)**
h. Dates of process unit shutdown that occur while the equipment is unrepaired. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(c)(8), 40 CFR 60.486a(c)(8))**
i. The date of successful repair of the leak. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(c)(9), 40 CFR 60.486a(c)(9))**

6. The permittee shall record the following information pertaining to the design requirements for closed vent systems and control devices described in 40 CFR 60.482-10 or 40 CFR 60.482-10a and shall be kept in a readily accessible location: **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(d), 40 CFR 60.486a(d))**
   a. Detailed schematics, design specifications, and piping and instrumentation diagrams. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(d)(1), 40 CFR 60.486a(d)(1))**
   b. The dates and descriptions of any changes in the design specifications. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(d)(2), 40 CFR 60.486a(d)(2)**
   c. A description of the parameter or parameters monitored, as required in 40 CFR 60.482-10(e) or 40 CFR 60.482-10a(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(d)(3), 40 CFR 60.486a(d)(3))**
   d. Periods when the closed vent systems and control devices required in 40 CFR 60.482-2, 40 CFR 60.482-3, 40 CFR 60.482- 4, and 40 CFR 60.482-5; or 40 CFR 60.482-2a, 40 CFR 60.482-3a, 40 CFR 60.482- 4a, and 40 CFR 60.482-5a are not operated as designed, including periods when a flare pilot light does not have a flame. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(d)(4), 40 CFR 60.486a(d)(4))**
   e. Dates of startups and shutdowns of the closed vent systems and control devices required in 40 CFR 60.482-2, 40 CFR 60.482-3, 40 CFR 60.482-4, and 40 CFR 60.482-5; or 40 CFR 60.482-2a, 40 CFR 60.482-3a, 40 CFR 60.482.4a, and 40 CFR 60.482-5a. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(d)(5), 40 CFR 60.486a(d)(5))**
7. The following information pertaining to all equipment subject to the requirements in 40 CFR 60.482-1 to 40 CFR 60.482-10 or 40 CFR 60.482-1a to 40 CFR 60-482-11a shall be recorded in a log that is kept in a readily accessible location. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(e), 40 CFR 60.486a(e))**
   a. A list of identification numbers for equipment subject to the requirements of 40 CFR Part 60, Subpart VV or 40 CFR Part 60, Subpart VVa. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(e)(1), 40 CFR 60.486a(e)(1))**

i. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-2(e), 40 CFR 60.482-3(i) and 40 CFR 60.482-7(f) or 40 CFR 60.482-2a(e), 40 CFR 60.482-3a(i) and 40 CFR 60.482-7a(f). **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(e)(2)(i), 40 CFR 60.486a(e)(2)(i))**

ii. The designation of equipment as subject to the requirements of 40 CFR 60.482-2(e), 40 CFR 60.482-3(i), or 40 CFR 60.482-7(f) or 40 CFR 60.482-2a(e), 40 CFR 60.482-3a(i) or 40 CFR 60.482-7a(f). shall be signed by the permittee. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(e)(2)(ii), 40 CFR 60.486a(e)(2)(ii))**

b. A list of equipment identification numbers for pressure relief devices required to comply with 40 CFR 60.482-4 or 40 CFR 60.482-4a. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(e)(3), 40 CFR 60.486a(e)(3))**

c. The dates of each compliance test as required in 40 CFR 60.482-2(e), 40 CFR 60.482-3(i), 40 CFR 60.482-4, and 40 CFR 60.482-7(f) or 40 CFR 60.482-2a(e), 40 CFR 60.482-3a(i), 40 CFR 60.482-4a, and 40 CFR 60.482-7a(f). **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(e)(4)(i), 40 CFR 60.486a(e)(4)(i))**

i. The background level measured during each compliance test. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(e)(4)(ii), 40 CFR 60.486a(e)(4)(ii))**

ii. The maximum instrument reading measured at the equipment during each compliance test. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(e)(4)(iii), 40 CFR 60.486a(e)(4)(iii))**

d. A list of identification numbers for equipment in vacuum service. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(e)(5), 40 CFR 60.486a(e)(5))**

e. For sources subject to 40 CFR Part 60, Subpart VVa, the date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service. **(40 CFR 60.592a(e), 40 CFR 60.486a(e)(7))**

f. For sources subject to 40 CFR Part 60, Subpart VVa, records of the information specified in paragraphs 40 CFR 60.486a(e)(8)(i-vi) for monitoring instrument calibrations conducted according to Method 21, Sections 8.1.2 and 10 and 40 CFR 60.485a(b). **(40 CFR 60.592a(e), 40 CFR 60.486a(e)(8))**

i. Date of calibration and initials of operator performing the calibration. **(40 CFR 60.592a(e), 40 CFR 60.486a(e)(8)(i))**

ii. Calibration gas cylinder identification, certification date, and certified concentration. **(40 CFR 60.592a(e), 40 CFR 60.486a(e)(8)(ii))**

iii. Instrument scale(s) used. **(40 CFR 60.592a(e), 40 CFR 60.486a(e)(8)(iii))**

iv. A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21. **(40 CFR 60.592a(e), 40 CFR 60.486a(e)(8)(iv))**

v. Results of each calibration drift assessment required by 40 CFR 60.485a(b)(2) (i.e., instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value). **(40 CFR 60.592a(e), 40 CFR 60.486a(e)(8)(v))**

vi. If the permittee makes their own calibration gas, a description of the procedure used. **(40 CFR 60.592a(e), 40 CFR 60.486a(e)(8)(vi))**

vii. For sources subject to 40 CFR Part 60, Subpart VVa, the connector monitoring schedule for each process unit as specified in 40 CFR 60.482–11a(b)(3)(v). **(40 CFR 60.592a(e), 40 CFR 60.486a(e)(9))**

viii. For sources subject to 40 CFR Part 60, Subpart VVa, records of each release from a pressure relief device subject to 40 CFR 60.482–4a. **(40 CFR 60.592a(e), 40 CFR 60.486a(e)(10))**

8. The following information pertaining to all valves subject to the requirements in 40 CFR 60.482-7(g and h) or 40 CFR 60.482-7a(g and h), to all pumps subject to the requirements in 40 CFR 60.482-2(g) or 40 CFR 60.482-2a(g), and to all connectors subject to the requirements of 40 CFR 60.482-11a(e) shall be recorded in a log that is kept in a readily accessible location. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(f), 40 CFR 60.486a(f))**

a. A list of identification numbers for valves, pumps, and connectors that are designated as unsafe-to-monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe-to-monitor, and a plan to monitor each valve, pump, or connector. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(f)(1), 40 CFR 60.486a(f)(1))**

b. A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and a schedule to monitor each valve. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(f)(2), 40 CFR 60.486a(f)(2))**

9. The following information shall be recorded for valves complying with 40 CFR 60.483-2 or 40 CFR 60.483-2a. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(g), 40 CFR 60.486a(g))**

a. A schedule of monitoring **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(g)(1), 40 CFR 60.486a(g)(1))**
b. The percent of valves found leaking during each monitoring period. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(g)(2), 40 CFR 60.486a(g)(2))**

10. The following information shall be recorded in a log that is kept in a readily accessible location: **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(h), 40 CFR 60.486a(h))**
    a. Design criterion required in 40 CFR 60.482-2(d)(5),or 40 CFR 60.482-2a(d)(5), and 40 CFR 60.482-3(e)(2) or 40 CFR 60.482-3a(e)(2) and explanation of the design criterion; and **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(h)(1), 40 CFR 60.486a(h)(1))**
    b. Any changes to this criterion and the reasons for the changes. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(h)(2), 40 CFR 60.486a(h)(2))**
11. The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in 40 CFR 60.480(d) or 40 CFR 60.480a(d): **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(i), 40 CFR 60.486a(i))**
    a. An analysis demonstrating the design capacity of the affected facility, **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(i)(1), 40 CFR 60.486a(i)(1))**
    b. A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(i)(2), 40 CFR 60.486a(i)(2))**
    c. An analysis demonstrating that equipment is not in VOC service. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(i)(3), 40 CFR 60.486a(i)(3))**
12. Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location. **(40 CFR 60.592(e), 40 CFR 60.592a(e), 40 CFR 60.486(j), 40 CFR 60.486a(j))**
13. The permittee Subject to the provisions of 40 CFR Part 60, Subpart VV or VVa may comply with exceptions to Subpart VV or VVa as provided by 40 CFR 60.593 or 40 CFR 60.593a for:
    a. Compressors in hydrogen service
    b. Equipment in light liquid service
    c. Pumps in light liquid service
    d. Valves in gas/vapor service and light liquid service.

4.F. Recordkeeping Provisions – Actual to Projected-Actual Applicability Test

All information in this Appendix shall be maintained pursuant to R 336.2818 and 40 CFR 52.21(r)(6)(i) for 10 years after the emission units identified in Table C resume normal operations, and shall be made available to the Department upon request.

A. Project Description:

The Detroit Heavy Oil Upgrade Project (Detroit HOUP) will expand the capacity of the Detroit Refinery and install new process units and support equipment to allow the facility to refine a new source of crude oil. The proposed changes include the installation of a new delayed coker and coker gas plant, a new hydrogen plant and a second sulfur recovery unit, a replacement distillate hydrotreater, new storage tanks, a new flare system, a new cooling tower and changes to many of the existing process units at the refinery.

These changes are described in Permit to Install application number 63-08.

B. Applicability Test Description:

For all new emission units, the increase in actual emissions from the Detroit HOUP is based on the actual-to-potential test. For most existing emission units included in the Detroit HOUP, the potential to emit is based on requested maximum allowable emission rates as opposed to the maximum design capacity of the units, and the actual emissions increase due to the Detroit HOUP for those emission units was also based on the actual-to-potential calculation. The only exception to the use of the actual-to-potential test is for the existing flare systems, included in FGREFINEFLARES-S1 in the permit.

C. Emission Units Using Actual-to-Projected Actual Test:

Emission Unit/Flexible Group ID	Pollutant	Emissions (tpy)			Reason for Exclusion
		Baseline Actual	Projected Actual	Excluded	
FGREFINEFLARES-S1	NOx	3.1	2.9	-	
	SO_2	23.2	3.3	-	
	VOC	13.5	6.9	-	
	CO	13.5	14	-	
	PM	0.08	0.08	-	
	PM10	0.31	0.31	-	
	H_2SO_4	1.87	0.26	-	
	H_2S	3.1	0.03		
	TRS	3.4	0.03		

D. Emission Units Using Potential to Emit:

Emission estimates for the Detroit HOUP have used Potential to Emit for the following emission units/flexible groups:

EU11-FCCU-S1
FG29-IGF-S1
EU72-SULRBLOCK2-S1
FG-PROCUNITS-S1
EU14-CCRPLCATREG-S1
EU42-43SULRECOV-S1
EU-COKERFLARE-S1
FGCOOLTOWERS-S1
EU21-S2OFFGAS-S1
EU70-COKER-S1
FGHEATERS-S1
FGHOUPTANKS-S1

The flexible group FGDHOUPANNUAL-S1 has been created to account for the emissions from this group of equipment.

Emission estimates for the Detroit HOUP have used Potential to Emit for the following emission units/flexible groups:

EU71-H2HTR-S3
EUH2NSPSQQQ-S3
EU71-H2PLANT-S3
FGDHOUPANNUAL-S3
EU71-H2STEAMSYS-S3

The flexible group FGDHOUPANNUAL-S3 has been created to account for the emissions from this group of equipment.

E. Netting Calculations and Discussion:

Emissions changes from the Detroit HOUP are summarized below. The Detroit HOUP emissions include the projected actual emissions from the existing refinery flares. In cases where the project emissions exceed their regulatory significance threshold, a netting analysis was conducted whereby the sum of the contemporaneous emission increases and decreases were combined with the Detroit HOUP emissions to determine the net emissions impact. Emission decreases associated with a federal Consent Decree are not creditable in determining the net emissions impact and have been excluded from the calculation.

Detroit HOUP Net Emissions Changes (tons per year)

	VOC	NOx	SO_2	PM	PM10	CO	H_2SO_4	H_2S	TRS
Detroit HOUP	-38	198	208	33	-14	85	12	3	3
Contemporaneous Increases	54	91	8	10	18	0	1	-	-
Contemporaneous Decreases	20	290	219	43	18	0	18	-	-
Total	-5	-1	-3	0	-14	85	-5	3	3
Significance Level	40	40	40	25	15	100	7	10	10

F. Pre-Construction Projection of Emissions:

The following table shows the pre-construction estimate of emissions from the Detroit HOUP. The table identifies the projected annual emission rate for emission units using the actual-to-projected actual test, and the potential emission rate for emission units using the actual-to-potential test.

Detroit HOUP Pre-Construction Emissions Projection (tons per year)

	VOC	NOx	SO_2	PM	PM10	CO	H_2SO_4	H_2S	TRS
Projected emissions for units using actual-to-projected actual test (FGREFINEFLARES-S1)	7	3	3	0.1	0.3	14	0.26	0.03	0.03
Potential to emit for units using actual-to-potential test (FGDHOUPANNUAL-S1 and FGDHOUPANNUAL-S3)	462	642	371	122.2	206.6	251.5	22.76	8.44	9.73
Detroit HOUP Total Projected Emissions	469	645	374	122.3	206.9	268	23.02	8.47	9.76

G. Recordkeeping:

The annual records shall contain the following information and be presented in a format acceptable to the AQD Permit Section Supervisor:

Pre-construction projection of actual emissions for emission units using the actual-to-projected actual test (FGREFINEFLARES-S1).

Calendar year actual emissions for emission units using the actual-to-projected actual test (FGREFINEFLARES-S1).

Potential-to-emit for emission units using the actual-to-potential test (FGDHOUPANNUAL-S1 and FGDHOUPANNUAL-S3).

Detroit HOUP Annual Emissions Record (tons per year)

	VOC	NOx	SO_2	PM	PM10	CO	H_2SO_4	H_2S	TRS
Projected emissions for units using actual-to-projected actual test (FGREFINEFLARES-S1)	7	3	3	0.1	0.3	14	0.26	0.03	0.03

Potential to emit for units using actual-to-potential test (FGDHOUPANNUAL-S1 and FGDHOUPANNUAL-S3)	462	642	371	122.2	206.6	251.5	22.769	8.44	9.73
Detroit HOUP Pre-construction Projection	469	645	374	122.3	206.9	268	23.02	8.47	9.76
Actual emissions for units using actual-to-projected actual test (FGREFINEFLARES-S1)									
Potential to emit for units using actual-to-potential test (FGDHOUPANNUAL-S1 and FGDHOUPANNUAL-S3)	462	642	371	122.2	206.6	251.5	22.76	8.44	9.73
Detroit HOUP Annual Emissions for Calendar Year(1)									

(1) Sum of actual emissions for units using actual-to-projected actual test (FGREFINEFLARES-S1) plus potential to emit for units using actual-to-potential test (FGDHOUPANNUAL-S1).

H. Netting Summary:

The net emissions for DHOUP shall be summarized based on the calendar year actual emissions for all emission units associated with the project.

Detroit HOUP Emission Netting Summary (tons per year)

	VOC	NOx	SO_2	PM	PM10	CO	H_2SO_4	H_2S	TRS
Actual emissions for units using actual-to-projected actual test (FGREFINEFLARES-S1)									
Actual emissions for units using actual-to-potential test (FGDHOUPANNUAL-S1 and FGDHOUPANNUAL-S3)									
Detroit HOUP Actual Emissions for Calendar Year(1)									
Detroit HOUP Baseline Emissions	441	357	178	81	202.3	183	12.04	8.84	10.01
DHOUP Actual Emissions minus Baseline Emissions(2)									
Contemporaneous Emission Increases (3), (4)	26	0	0	0	0	0	0	-	-
Contemporaneous/Creditable Emission Decreases (4), (5)	-66	-290	-219	-43	-18	0	-18	-	-

Other Contemporaneous Increases/Decreases(6)	0.13								
Net DHOUP Actual Emissions Increase (Add four lines above)									
PSD Significance Level	40	40	40	25	15	100	7	10	10

(1) Sum of actual emissions for units using actual-to-projected actual test (FGREFINEFLARES-S1) plus actual emissions for units using actual-to-potential test (FGDHOUPANNUAL-S1)
(2) Includes emission increases for several projects in contemporaneous period.
(3) Excludes contemporaneous increases embedded in the line item for DHOUP Actual Emissions, including the 2005 expansion (see footnote 2).
(4) Netting analysis was not required for hydrogen sulfide or total reduced sulfur compounds.
(5) The creditable decreases for VOC include 46 tons per year due to controlling emissions from 29 pressure relief valves to atmosphere in the LPG Tank Farm that are included in the "Detroit HOUP" line in the table in section E above.
(6) Other emissions increases and decreases occurring during the contemporaneous period (after issuance of the Permit to Install for the DHOUP but before startup of the DHOUP). This includes PTI 96-11.

4.G. Recordkeeping Provisions – Recordkeeping Provisions for Source Using Actual to Projected-Actual Applicability Test

All information in this Appendix shall be maintained pursuant to R 336.2902(6) for five years after the start-up of EU08-GOHTCHARHTR2-S1 or the new reactor in EU08-GOHT-S1, whichever occurs first, and shall be made available to the Department upon request.

A. Project Description:

The Tier 3 Fuels Project will allow the facility to produce gasoline with a lower sulfur content that will comply with the US EPA Tier 3 standard. This project includes installation of a second gasoil hydrotreater charge heater (EU08-GOHTCHARHTR2-S1) and a second reactor in the gasoil hydrotreater process unit (EU08-GOHT-S1). The project also may result in emission changes for some existing emission units (EU08-GOHTCHARHTR-S1, EU71-H2HTR-S1, EU71-H2STEAMSYS-S1, EU42-43SULRECOV-S1, and EU72-SULRBLOCK2-S1)

B. Applicability Test Description:

For all new emission units, the increase in actual emissions from the project is based on the actual-to-potential test. For existing emission units, the actual emissions increase due to the project was based on the actual-to-projected actual test.

C. Emission Projections

Emission Unit/Flexible Group ID	Pollutant	Emissions (tpy)				Reason for Exclusion
		Baseline Actual	Projected Actual[a]	Excluded	Project Increase	
FGTIER3-S1	SO_2	57.53	64.14	12.2	3.63	Excluded emissions are emissions due to product demand growth that are unrelated to the project and that the existing equipment was capable of accommodating. Emissions are based on CEMS data, emission test data, and production/throughput data.

a. This includes the potential to emit for the new heater, EU08-GOHTCHARHTR2-S1.

D. Actual Emissions

Emission Unit/Flexible Group ID	Pollutant	Emissions (tpy)				Reason for Exclusion
		Baseline Actual	Actual	Excluded	Project Increase	
FGTIER3-S1	SO_2	57.53				

4.H. Recordkeeping Provisions – Recordkeeping Provisions for Sulfur Dioxide

A. Project Description:

The Tier 3 Fuels Project will allow the facility to produce gasoline with a lower sulfur content that will comply with the US EPA Tier 3 standard. This project includes installation of a second gasoil hydrotreater charge heater (EU08-GOHTCHARHTR2-S1) and a second reactor in the gasoil hydrotreater process unit (EU08-GOHT-S1). The project also may result in emission changes for some existing emission units (EU08-GOHTCHARHTR-S1, EU11-FCCU-S1, EU71-H2HTR-S1, EU42-43SULRECOV-S1, and EU72-SULRBLOCK2-S1)

B. The permittee will document that there has been no increase in actual sulfur dioxide emissions from the Tier 3 Fuels Project.

C. Actual Emissions

Emission Unit/Flexible Group ID	Pollutant	Baseline Actual Emissions	Calendar Year Actual Emissions (tpy)
FGTIER3SO2-S1	SO_2	89.03	

Appendix 5-S1. Testing Procedures

5.A. The permittee shall use the following approved test plans, procedures, and averaging to measure the pollutant emissions for the applicable requirements referenced in FGHEATERS-S1.

NSPS Subpart J

1. The permittee, in conducting the performance tests required in 40 CFR 60.8, shall use as reference methods and procedures the test methods in 40 CFR Part 60, Appendix A or other methods and procedures as specified in 40 CFR 60.106(a), except as provided in 40 CFR 60.8(b). **(40 CFR 60.106(a))**

5.B. The permittee shall use the following approved test plans, procedures, and averaging to measure the pollutant emissions for the applicable requirements referenced in FGIFRTANKS-S1 and FGEFRTANKS-S1.

NSPS Subpart Kb – Volatile Organic Liquid (VOL) Storage Vessels

1. The permittee shall meet the requirements of paragraph 40 CFR 60.113b(a, b, or c). The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of 40 CFR 60.112b. **(40 CFR 60.113b))**
   a. After installing the control equipment required to meet 40 CFR 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall: **(40 CFR 60.113b(a))**
      i. For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the permittee shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, two 30-day extensions may be requested from the Administrator in the inspection report required in 40 CFR 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible. **(40 CFR 60.113b(a)(2))**
      ii. For vessels equipped with a double-seal system as specified in 40 CFR 60.112b(a)(1)(ii)(B): **(40 CFR 60.113b(a)(3))**
         A. Visually inspect the vessel as specified in 40 CFR 60.113b(a)(4) at least every 5 years; or **(40 CFR 0.113b(a)(3)(i))**
         B. Visually inspect the vessel as specified in 40 CFR 60.113b(a)(2). **(40 CFR 60.113b(a)(3)(ii))**
      iii. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10% open area, the permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in 40 CFR 60.113b(a)(2) and 40 CFR 60.113b(a)(3)(ii) and at intervals no greater than 5 years in the case of vessels specified in 40 CFR 60.113b(a)(3)(i). **(40 CFR 60.113b(a)(4))**

5.C. The permittee shall use the following approved test plans, procedures, and averaging to measure the pollutant emissions for the applicable requirements referenced in FGPROCVENTS-S1.

40 CFR Part 63, Subpart CC- Refinery MACT 1 – Miscellaneous Process Vents, Test Methods and Procedures

1. To demonstrate compliance with 40 CFR 63.643, permittee shall follow 40 CFR 63.116 except for 40 CFR 63.116(a)(1), 40 CFR 63.116(d) and 40 CFR 63.116(e), of 40 CFR Part 63, Subpart G except as provided in paragraphs 40 CFR 63.645(b-d) and paragraph 40 CFR 63.645(i). **(40 CFR 63.645(a))**
2. All references to 40 CFR 63.113(a)(1or 2) in 40 CFR 63.116 shall be replaced with 40 CFR 63.643(a)(1 or 2), respectively. **(40 CFR 63.645(b))**
3. In 40 CFR 63.116(c)(4)(ii)(C), organic HAPs in the list of HAPs in table 1 of 40 CFR Part 63, Subpart CC shall be considered instead of the organic HAPs in table 2 of 40 CFR Part 63, Subpart F. **(40 CFR 63.645(c))**
4. All references to 40 CFR 63.116(b)(1 or 2) shall be replaced with paragraphs 40 CFR 63.645(d)(1 and 2), respectively. **(40 CFR 63.645(d))**
   a. Any boiler or process heater with a design heat input capacity of 44 megawatts or greater (150 million BTU per hour). **(40 CFR 63.645(d)(1))**
   b. Any boiler or process heater in which all vent streams are introduced into the flame zone. **(40 CFR 63.645(d)(2))**
5. For purposes of determining the TOC emission rate, as specified under paragraph 40 CFR 63.645(f), the sampling site shall be after the last product recovery device (as defined in 40 CFR 63.641) (if any recovery devices are present) but prior to the inlet of any control device (as defined in 40 CFR 63.641) that is present, prior to any dilution of the process vent stream, and prior to release to the atmosphere. **(40 CFR 63.645(e))**
   a. Methods 1 or 1A of 40 CFR Part 60, Appendix A, as appropriate, shall be used for selection of the sampling site. **(40 CFR 63.645(e)(1))**
   b. No traverse site selection method is needed for vents smaller than 0.10 meter in diameter. **(40 CFR 63.645(e)(2))**
6. Except as provided in paragraph 40 CFR 63.645(g), permittee seeking to demonstrate that a process vent TOC mass flow rate is less than 33 kilograms per day for an existing source or less than 6.8 kilograms per day for a new source in accordance with the Group 2 process vent definition of 40 CFR Part 63, Subpart CC shall determine the TOC mass flow rate by the following procedures: **(40 CFR 63.645(f))**
   a. The sampling site shall be selected as specified in paragraph 40 CFR 63.645(e). **(40 CFR 63.645(f)(1))**
   b. The gas volumetric flow rate shall be determined using Methods 2, 2A, 2C, or 2D of 40 CFR Part 60, Appendix A, as appropriate. **(40 CFR 63.645(f)(2))**
   c. Method 18 or Method 25A of 40 CFR Part 60, Appendix A shall be used to measure concentration; alternatively, any other method or data that has been validated according to the protocol in Method 301 of 40 CFR Part 63, Appendix A may be used. If Method 25A is used, and the TOC mass flow rate calculated from the Method 25A measurement is greater than or equal to 33 kilograms per day for an existing source or 6.8 kilograms per day for a new source, Method 18 may be used to determine any non-VOC hydrocarbons that may be deducted to calculate the TOC (minus non-VOC hydrocarbons) concentration and mass flow rate. The following procedures shall be used to calculate parts per million by volume concentration: **(40 CFR 63.645(f)(3))**
      i. The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run. **(40 CFR 63.645(f)(3)(i))**
      ii. The TOC concentration (C_{TOC}) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation if Method 18 is used:

$$C_{TOC} = \frac{\sum_{i=1}^{x}\left(\sum_{j=1}^{n} C_{ji}\right)}{X}$$

(40 CFR 63.645(f)(3)(ii)

d. The emission rate of TOC (minus methane and ethane) (E_{TOC}) shall be calculated using the following equation if Method 18 is used: **(40 CFR 63.645(f)(4))**

$$E = K_2 \left[\sum_{j=1}^{n} C_j M_j \right] Q_s$$

e. If Method 25A is used, the emission rate of TOC (E_{TOC}) shall be calculated using the following equation: **(40 CFR 63.645(f)(5))**

$$E_{TOC} = K_2 C_{TOC} M Q_s$$

7. Engineering assessment may be used to determine the TOC emission rate for the representative operating condition expected to yield the highest daily emission rate. **(40 CFR 63.645(g))**
   a. Engineering assessment includes, but is not limited to, the following: **(40 CFR 63.645(g)(1))**
      i. Previous test results provided the tests are representative of current operating practices at the process unit. **(40 CFR 63.645(g)(1)(i))**
      ii. Bench-scale or pilot-scale test data representative of the process under representative operating conditions. **(40 CFR 63.645(g)(1)(ii))**
      iii. TOC emission rate specified or implied within a permit limit applicable to the process vent. **(40 CFR 63.645(g)(1)(iii))**
      iv. Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to: **(40 CFR 63.645(g)(1)(iv))**
         A. Use of material balances based on process stoichiometry to estimate maximum TOC concentrations; **(40 CFR 63.645(g)(1)(iv)(A))**
         B. Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities; and **(40 CFR 63.645(g)(1)(iv)(B))**
         C. Estimation of TOC concentrations based on saturation conditions. **(40 CFR 63.645(g)(1)(iv)(C))**
      v. All data, assumptions, and procedures used in the engineering assessment shall be documented. **(40 CFR 63.645(g)(1)(v))**
8. The permittee for a Group 2 process vent shall recalculate the TOC emission rate for each process vent, as necessary, whenever process changes are made to determine whether the vent is in Group 1 or Group 2. Examples of process changes include, but are not limited to, changes in production capacity, production rate, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph, process changes do not include: process upsets; unintentional, temporary process changes; and changes that are within the range on which the original calculation was based. **(40 CFR 63.645(h))**
   a. The TOC emission rate shall be recalculated based on measurements of vent stream flow rate and TOC as specified inparagraphs 40 CFR 63.645(e and f), as applicable, or on best engineering assessment of the effects of the change. Engineering assessments shall meet the specifications in paragraph 40 CFR 63.645(g). **(40 CFR 63.645(h)(1))**
   b. Where the recalculated TOC emission rate is greater than 33 kilograms per day for an existing source or greater than 6.8 kilograms per day for a new source, the owner or operator shall submit a report as specified in 40 CFR 63.655(f, g, or h) and shall comply with the appropriate provisions in 40 CFR 63.643 by the dates specified in 40 CFR 63.640. **(40 CFR 63.645(h)(2))**
9. A compliance determination for visible emissions shall be conducted within 150 days of the compliance date using Method 22 of 40 CFR part 60, Appendix A, to determine visible emissions. **(40 CFR 63.645(i))**

5.D. The permittee shall use the following approved test plans, procedures, and averaging to measure the pollutant emissions for the applicable requirements referenced in EUNSPSQQQ-S1.

40 CFR 60 Subpart QQQ- VOC Emissions from Refinery Wastewater Systems.

1. Before using any equipment installed in compliance with the requirements of 40 CFR 60.692-2, 40 CFR 60.692-3, 40 CFR 60.692-4, 40 CFR 60.692-5, or 40 CFR 60.693, the permittee shall inspect such equipment for indications of potential emissions, defects, or other problems that may cause the requirements of 40 CFR 60, Subpart QQQ not to be met. Points of inspection shall include, but are not limited to, seals, flanges, joints, gaskets, hatches, caps, and plugs. **(40 CFR 60.696(a))**
2. The permittee of each source that is equipped with a closed vent system and control device as required in 40 CFR 60.692-5 (other than a flare) is exempt from 40 CFR 60.8 of the General Provisions and shall use Method 21 to measure the emission concentrations, using 500 ppm as the no detectable emission limit. The instrument shall be calibrated each day before using. The calibration gases shall be: **(40 CFR 60.696(b))**
   a. Zero air (less than 10 ppm of hydrocarbon in air), and **(40 CFR 60.696(b)(1))**
   b. A mixture of either methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane. **(40 CFR 60.696(b)(2))**
3. The permittee shall conduct a performance test initially, and at other times as requested by the Administrator, using the test methods and procedures in 40 CFR 60.18(f) to determine compliance of flares. **(40 CFR 60.696(c))**
4. After installing the control equipment required to meet 40 CFR 60.693-2(a) or whenever sources that have ceased to treat refinery wastewater for a period of 1 year or more are placed back into service, the permittee shall determine compliance with the standards in 40 CFR 60.693-2(a) as follows: **(40 CFR 60.696(d))**
   a. The maximum gap widths and maximum gap areas between the primary seal and the separator wall and between the secondary seal and the separator wall shall be determined individually within 60 calendar days of the initial installation of the floating roof and introduction of refinery wastewater or 60 calendar days after the equipment is placed back into service using the following procedure when the separator is filled to the design operating level and when the roof is floating off the roof supports. **(40 CFR 60.696(d)(1))**
      i. Measure seal gaps around the entire perimeter of the separator in each place where a 0.32 cm (0.125 in.) diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the separator and measure the gap width and perimetrical distance of each such location. **(40 CFR 60.696(d)(1)(i))**
      ii. The total surface area of each gap described in 40 CFR 60.696d)(1)(i) shall be determined by using probes of various widths to measure accurately the actual distance from the wall to the seal and multiplying each such width by its respective perimetrical distance. **(40 CFR 60.696(d)(1)(ii))**
      iii. Add the gap surface area of each gap location for the primary seal and the secondary seal individually, divide the sum for each seal by the nominal perimeter of the separator basin and compare each to the maximum gap area as specified in 40 CFR 60.693-2. **(40 CFR 60.696(d)(1)(iii))**
   b. The gap widths and total gap area shall be determined using the procedure in paragraph 40 CFR 60.696(d)(1) according to the following frequency: **(40 CFR 60.696(d)(2))**
      i. For primary seals, once every 5 years. **(40 CFR 60.696(d)(2)(i))**
      ii. For secondary seals, once every year. **(40 CFR 60.696(d)(2)(ii))**

5.E. The permittee shall use the following approved test plans, procedures, and averaging to measure the pollutant emissions for the applicable requirements referenced in FGPROCUNITS-S1.

40 CFR Part 60 Subparts VV and VVa and Subparts GGG and GGGa- Leak Detection and Repair Testing Requirements.

1. In conducting the performance tests required in 40 CFR 60.8, the permittee shall use as reference methods and procedures the test methods in Appendix A of 40 CFR Part 60 or other methods and procedures as specified in 40 CFR 60.485, except as provided in 40 CFR 60.8(b). **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(a), 40 CFR 60.485a(a))**
2. The permittee shall determine compliance with the standards in 40 CFR 60.482, 40 CFR 60.483, and 40 CFR 60.484 or 40 CFR 60.482a, 40 CFR 60.483a, and 40 CFR 60.484a as follows: **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(b), 40 CFR 60.485a(b))**

a. Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used: **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(b)(1), 40 CFR 60.485a(b)(1))**
   i. Zero air (less than 10 ppm of hydrocarbon in air); and **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(b)(1)(i), 40 CFR 60.485a(b)(1)(i))**
   ii. For source subject to 40 CFR Part 60, Subpart VV use paragraph A below and for sources subject to Subpart VVa use paragraph B below.
      A. A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. **(40 CFR 60.592(d), 40 CFR 60.485(b)(1)(ii))**
      B. A mixture of methane or n-hexane and air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the permittee need not calibrate the scales that will not be used during that day's monitoring. **(40 CFR 60.592a(d), 40 CFR 60.485a(b)(1)(ii))**

b. A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of 40 CFR Part 60, Appendix A–7, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in 40 CFR 60.486a(e)(7). Calculate the average algebraic difference between the three meter readings and the most recent calibration value. Divide this algebraic difference by the initial calibration value and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10% from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10% from the initial calibration value, then, at the permittee's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored. **(40 CFR 60.592a(d), 40 CFR 60.485a(b)(2))**

3. The permittee shall determine compliance with the no detectable emission standards in 40 CFR 60.482-2(e), 40 CFR 60.482-3(i), 40 CFR 60.482-4, 40 CFR 60.482-7(f), and 40 CFR 60.482-10(e) or 40 CFR 60.482-2a(e), 40 CFR 60.482-3a(i), 40 CFR 60.482-4a, 40 CFR 60.482-7a(f), and 40 CFR 60.482-10a(e) as follows: **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(c), 40 CFR 60.485a(c))**
   a. The requirements of paragraph 40 CFR 60.485(b) or 40 CFR 60.485a(b) shall apply. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(c)(1), 40 CFR 60.485a(c)(1))**
   b. Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentrations indicates by the instrument and the background level is compared with 500 ppm for determining compliance. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(c)(2), 40 CFR 60.485a(c)(2))**
4. The permittee shall test each piece of equipment unless the permittee demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10% by weight. For purposes of this demonstration, the following methods and procedures shall be used: **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(d), 40 CFR 60.485a(d)**
   a. Procedures that conform to the general methods in ASTM E-260, ASTM E-168, ASTM E-169 (incorporated by reference see 40 CFR 60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(d)(1), 40 CFR 60.485a(d)(1))**
   b. Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(d)(2), 40 CFR 60.485a(d)(2))**
   c. Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, paragraphs 40 CFR 60.485(d)(1 and 2) or 40 CFR 60.485a(d)(1 and 2) shall be used to resolve the disagreement. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(d)(3), 40 CFR 60.485a(d)(3)**

5. The permittee shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply: **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(e), 40 CFR 60.485a(e))**
   a. The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 °C. Standard reference texts or ASTM D-2879 (incorporated by reference see 40 CFR 60.17) shall be used to determine the vapor pressures. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(e)(1), 40 CFR 60.485a(e)(1))**
   b. The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. water at 68 °F) is equal to or greater than 20% by weight. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(e)(2), 40 CFR 60.485a(e)(2))**
   c. The fluid is a liquid at operating conditions. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(e)(3), 40 CFR 60.485a(e)(3))**
6. Samples used in conjunction with paragraphs 40 CFR 60.485(d), 40 CFR 60.485(e), and 40 CFR 60.485(g) or 40 CFR 60.485a(d), 40 CFR 60.485a e), and 40 CFR 60.485a(g) shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(f), 40 CFR 60.485a(f))**
7. The permittee shall determine compliance with the standards of flares as follows: **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(g), 40 CFR 60.485a(g))**
   a. Method 22 shall be used to determine visible emissions. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(g)(1), 40 CFR 60.485a(g)(1))**
   b. A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(g)(2), 40 CFR 60.485a(g)(2))**
   c. The maximum permitted velocity (Vmax) for air-assisted flares shall be computed using the following equation: **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(g)(3), 40 CFR 60.485a(g)(3))**

$$V_{\max} = K_1 + K_2 H_T$$

See 40 CFR 60.485(g)(3) or 40 CFR 60.485a(g)(3) for the equation

   d. The net heating value (H_T) of the gas being combusted in a flare shall be computed as follows: **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(g)(4), 40 CFR 60.485a(g)(4))**

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

See 40 CFR 60.485(g)(4) or 40 CFR 60.485a(g)(4) for the equation

   e. Method 18 and ASTM D 2504-67 (incorporated by reference see 40 CFR 60.17) shall be used to determine the concentration of sample component ``i." **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(g)(5), 40 CFR 60.485a(g)(5))**
   f. ASTM D 2382-76 (incorporated by reference see 40 CFR 60.17) shall be used to determine the net heat of combustion of component ``i" if published values are not available or cannot be calculated. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(f g)(6), 40 CFR 60.485a(g)(6))**
   g. Method 2, 2A, 2C, or 2D, as appropriate, shall be used to determine the actual exit velocity of a flare. If needed, the unobstructed (free) cross-sectional area of the flare tip shall be used. **(40 CFR 60.592(d), 40 CFR 60.592a(d), 40 CFR 60.485(g)(7), 40 CFR 60.485a(g)(7))**

Appendix 6-S1. Permits to Install

The following table lists any PTIs issued since the effective date of previously issued ROP No. 199700013c

Permit to Install Number	Description of Equipment	Corresponding Emission Unit(s) or Flexible Group(s)
262-02	Refinery Expansion	EU11-FCCU-S1, EU14-CCRPLATFORMER-S1, EU14-CCRPLINTHTR-S1, EU14CCRPLCATREG-S1, EU42-43SULFRECOV-S1, EU22-ASPHALTHTR, FGHEATERS-S1, FG-PROCVENTS-S1, FGGROUP2-S1, FG-IFRTANKS-S1
175-06	Marathon is required to incorporate Consent Decree items into a permit to ensure that the items are federally enforceable and survive termination of the Consent Decree.	EU11-FCCU-S1, FGHEATERS-S1, EU04-VACHTR-S1 EU05-CRUDEHTR-S1
198-06	50,000 barrel internal floating roof ethanol storage tank and an ethanol off-load station to be located at the Detroit refinery.	EUETHTANK-S1
245-07B	Wastewater Treatment Plant Upgrade	EU29-WASTEWATER-S1, EUTANK29T79-S1, EUTANK22T118-S1, FGIFRTANKS-S1, EUTANK16-S1, EUTANK18-S1, EUTANK19-S1, EUTANK40-S1, EUTANK45-S1, EUTANK46-S1, EUTANK47-S1, EUTANK48-S1, EUTANK49-S1, EUTANK51-S1, EUTANK53-S1, EUTANK55-S1, EUTANK57-S1, EUTANK58-S1, EUTANK61-S1, EUTANK72-S1, EUTANK101-S1, EUTANK116-S1, EUTANK507-S1, EUTANK508-S1
136-09	Allow for the storage of toluene, cumene, or a xylene mixture in Tank 47 and to increase the throughput rate for Tank 47 to 4,000 barrels per day.	EUTANK47-S1, FGNAPHTHATANKS-S1

The following ROP amendments or modifications were issued after the effective date of ROP No. MI-ROP-A9831-2012.

Permit to Install Number	ROP Revision Application Number/Issuance Date	Description of Change	Corresponding Emission Unit(s) or Flexible Group(s)
197-10B	201300112/ January 16, 2014	Incorporate PTI No. 197-10B to add EU_ASPHALT and FGASPHALTLOADING.	EU_ASPHALT-S2 FGAsphaltLoading-S1/S2
96-11	201300135/ January 16, 2014	Incorporate PTI No. 96-11 to add FG-RAGLAYERTANKS-S1.	EU5TANK18 EU5TANK19 FG-RAGLAYERTANKS-S1
148-11A	201300136/ January 16, 2014	Incorporate PTI No. 148-11A to add EU38-BARGELOAD-S1.	EU38-BARGELOAD-S1
142-11A	201300137/ January 16, 2014	Incorporate PTI No. 142-11A to add EU22-ASPHLOAD-S1.	FGAsphaltLoading-S1 EG22-ASPHLOAD-S1 EU_Asphalt-S1 EU38-BARGELOAD-S1
82-11	201300138/ January 16, 2014	Incorporate PTI No. 82-11.	EU11-FCCU-S1, EU42-43SULRECOV-S1, EU-COKERFLARE-S1, FGFLARES-S1
18-12B	201300178/ September 12, 2016	Incorporate PTI No. 18-12B.	FG-BOILERS-S1
54-13	201400103/ September 12, 2016	Incorporate PTI No. 54-13.	EU22-PENTLOAD-S1
63-08D	201400171/ September 12, 2016	Incorporate PTI No. 63-08D.	EU-NSPSQQQ-S1, EU-BENZNESHAP-S1, FGHEATERS-S1, FGFLARES-S1, FGPROCVENTS-S1, FGPROCUNITS-S1, FGEFRTANKS-S1, FG29TANKS40-41-S1, FGGROUP2-S1, FG29-IGF-S1, FGTANKS133&134-S1, FGCRUDETANKS-S1, FGNAPHTHATANKS-S1, FGIFRTANKS-S1, FGCOOLTOWERS-S1, FGDHOUPANNUAL-S1, FGREFINEFLARES-S1, FGHOUPTANKS-S1, FGMACTDDDDD-S1
63-08E	201600111/ September 12, 2016	Incorporate PTI No. 63-08E which covers the emission units and flexible groups associated with the Detroit Heavy Oil Upgrade Project (DHOUP) at Marathon's Detroit Refinery. This PTI change is for one date in the permit conditions regarding NSPS Ja applicability so that the date matches Marathon's revised US EPA Consent Decree.	FGFLARES-S1

Appendix 7-S1. Emission Calculations

7.A. The permittee shall use the following calculations, where applicable, in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FGPROCVENTS-S1, FGGROUP2-S1, FGIFRTANKS-S1, FGEFRTANKS-S1, FGPROCUNITS-S1.

40 CFR Part 63, Subpart CC- Refinery MACT 1

If the permittee elects not to comply with the condition above, then the permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in Tables FGPROCVENTS-S1, FGGROUP2-S1, FGIFRTANKS-S1, FGEFRTANKS-S1, FGPROCUNITS-S1.

1. $E_A = 0.02 \Sigma EPV_1 + \Sigma EPV_2 + 0.05 \Sigma ES_1 + \Sigma ES_2 + \Sigma EGLR_{1C} + \Sigma EGLR_2 + (R) \Sigma EMV_1 + \Sigma EMV_2 + \Sigma EWW_{1C} + \Sigma EWW_2$

where: E_A = Emission rate, megagrams per year, allowed for the source.

EPV_1 = Sum of the residual emissions, megagrams per year, from all Group 1 miscellaneous process vents, as defined in 40 CFR 63.641.

EPV_2 = Sum of the emissions, megagrams per year, from all Group 2 process vents, as defined in 40 CFR Part 63.641.

ES_1 = Sum of the residual emissions, megagrams per year, from all Group 1 storage vessels, as defined in 40 CFR 63.641.

ES_2 = Sum of the emissions, megagrams per year, from all Group 2 storage vessels, as defined in 40 CFR 63.641.

$EGLR_{1C}$ = Sum of the residual emissions, megagrams per year, from all Group 1 gasoline loading racks, as defined in 40 CFR 63.641.

$EGLR_2$ = Sum of the emissions, megagrams per year, from all Group 2 gasoline loading racks, as defined in 40 CFR 63.641.

(R) ΣEMV_1 = Sum of the residual emissions megagrams per year, from all Group 1 marine tank vessels, as defined in 40 CFR 63.641.

R = 0.03 for existing sources, 0.02 for new sources.

EMV_2 = Sum of the emissions, megagrams per year from all Group 2 marine tank vessels, as defined in 40 CFR 63.641.

EWW_{1C} = Sum of the residual emissions from all Group 1 wastewater streams, as defined in 40 CFR 63.641. This term is calculated for each Group 1 stream according to the equation for EWWic in 40 CFR 63.652(h)(6).

EWW_2 = Sum of emissions from all Group 2 wastewater streams, as defined in 40 CFR 63.641. **(40 CFR 63.642(g))**

Appendix 8-S1. Reporting

8.A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the MDEQ Report Certification form (EQP 5736) and MDEQ Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

8.B. Other Reporting

The permittee shall use the following approved formats and procedures for the reporting requirements referenced in EU11-FCCU-S1. Alternative formats must be approved by the AQD District Supervisor.

1. In accordance with 40 CFR 60.7(c and d), the permittee shall submit two copies of an excess emission report (EER) and/or a summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a. A report of each exceedance of CO and NOx. This includes the date, time, and cause and corrective actions of all occurrences during the reporting period.
   b. A report of all periods of CEMS downtime and corrective action.
   c. A report of the total operating time of EU11-FCCU during the reporting period.
   d. If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.
2. In accordance with 40 CFR 60.7(c and d), the permittee shall submit two copies of an excess emission report (EER) and/or a summary report in an acceptable format to Air Quality Division, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a. A report of each exceedance of the opacity limit(s). This includes the date, time, and cause and corrective actions of all occurrences during the reporting period.
   b. A report of all periods of COMS downtime and corrective action.
   c. A report of the total operating time of the EU11-FCCU during the reporting period.
   d. If no exceedances or COMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall use the following approved formats and procedures for the reporting requirements referenced in EU27-B&WBOILER1-S1. Alternative formats must be approved by the AQD District Supervisor.

1. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
2. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2, 3 or 4 of Appendix B, 40 CFR Part 60.
3. The permittee shall install, certify, calibrate, maintain, and operate the CEMS in accordance with the requirements of 40 CFR 60.11, 40 CFR 60.13, and 40 CFR Part 60, Appendix A, the applicable performance specification test of 40 CFR Part 60, Appendices B and F. With respect to 40 CFR Part 60 Appendix F, in lieu of the requirements of 40 CFR Part 60, Appendix F(5.1.1, 5.1.3, and 5.1.4), the permittee shall conduct either a Relative Accuracy Audit (RAA) or a Relative Accuracy Test Audit (RATA) once every twelve (12) calendar quarters, provided that a Cylinder Gas Audit is conducted each calendar quarter. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F)
4. In accordance with 40 CFR 60.7(c and d), the permittee shall submit two copies of an excess emission report (EER) and/or a summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:

5. A report of each exceedance above the limits in the following table.

	Pollutant/Parameter	Limit
1	NOx	Table EU27-B&WBOILER1-S1, Conditions I.1 and I.2
2	H2S	Table EU27-B&WBOILER1-S1, Conditions I.10 and II.2
3	CO	Table EU27-B&WBOILER1-S1, Conditions I.3 and I.4

a. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period
b. A report of all periods of CEMS downtime and corrective action.
c. A report of the total operating time of EU271-B&WBOILER1 during the reporting period.
d. A report of any periods that the CEMS exceeds the instrument range.
e. If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

8.C. The permittee shall use the following approved formats and procedures for the reporting requirements referenced in the following:

FGPROCVENTS-S1, FGGROUP2-S1, FGIFRTANKS-S1, FGEFRTANKS-S1, FGPROCUNITS-S1, and EUNSPSQQQ-S1.

Alternative formats must be approved by the AQD District Supervisor.

1. The permittee shall comply with all applicable reporting requirements in 40 CFR 63.655. **(40 CFR 63.655)**

8.D. The permittee shall use the following approved formats and procedures for the reporting requirements referenced in FGIFRTANKS-S1 and FGEFRTANKS-S1. Alternative formats must be approved by the AQD District Supervisor.

40 CFR Part 63, Subpart CC, Refinery MACT 1- Internal and External Floating Roof Storage Tank Reporting

GENERAL

1. The permittee shall submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in paragraphs 40 CFR 63.655(g)(1 -6) occur. The first 6-month period shall begin on the date the Notification of Compliance Status report is required to be submitted. A Periodic Report is not required if none of the compliance exceptions specified in paragraphs 40 CFR 63.655(g)(1-6) occurred during the 6-month period unless emissions averaging is utilized. Quarterly reports must be submitted for emission points included in emissions averages, as provided in paragraph 40 CFR 63.655(g)(8). The permittee may submit reports required by other regulations in place of or as part of the Periodic Report required by this paragraph if the reports contain the information required by paragraphs 40 CFR 63.655(g)(1-8). **(40 CFR 63.655(g))**
   a. For storage vessels, Periodic Reports shall include the information specified for Periodic Reports in paragraph 40 CFR 63.655(g)(2) through (g)(5) except that information related to gaskets, slotted membranes, and sleeve seals is not required for storage vessels that are part of an existing source. **(40 CFR 63.655(g)(1))**
      i. If an extension is utilized in accordance with 40 CFR 63.120(a)(4), 40 CFR 63.120(b)(7)(ii) or 40 CFR 63.120(b)(8), the permittee shall, in the next Periodic Report, identify the vessel; include the documentation specified in 40 CFR 63.120(a)(4), 40 CFR 63.120(b)(7)(ii) or 40 CFR 63.120(b)(8), as applicable; and describe the date the vessel was emptied and the nature of and date the repair was made. **(40 CFR 63.655(g)(2)(i)(C), 40 CFR 63.655(g)(3)(ii))**
      ii. Each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made. **(40 CFR 63.655(g)(2)(ii)(B), 40 CFR 63.655(g)(3)(iii)(B))**
   b. If a performance test for determination of compliance for a new emission point subject to 40 CFR Part 63, Subpart CC or for an emission point that has changed from Group 2 to Group 1 is conducted during the

period covered by a Periodic Report, the results of the performance test shall be included in the Periodic Report. **(40 CFR 63.655(g)(7))**

i. Results of the performance test shall include the percentage of emissions reduction or outlet pollutant concentration reduction (whichever is needed to determine compliance) and the values of the monitored operating parameters. **(40 CFR 63.655(g)(7)(i))**

ii. The complete test report shall be maintained onsite. **(40 CFR 63.655(g)(7)(ii))**

2. The permittee shall submit notifications of inspections as specified in paragraphs 40 CFR 63.655(h)(2)(i) and (h)(2)(ii) for the storage vessels. **(40 CFR 63.655(h)(2)**

a. In order to afford the Administrator the opportunity to have an observer present, the permittee shall notify the Administrator of the refilling of each Group 1 storage vessel that has been emptied and degassed. **(40 CFR 63.655(h)(2)(i))**

i. Except as provided in paragraphs 40 CFR 63.655 (h)(2)(i) (B) and (C), the permittee shall notify the Administrator in writing at least 30 calendar days prior to filling or refilling of each storage vessel with organic HAPs to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. **(40 CFR 63.655(h)(2)(i)(A))**

ii. Except as provided in paragraph 40 CFR 63.655(h)(2)(i)(C, if the internal inspection required by 40 CFR 63.120(a)(2), 40 CFR63.120(a)(3), or 40 CFR 63.120(b)(10) is not planned and the permittee could not have known about the inspection 30 calendar days in advance of refilling the vessel with organic HAPs, the permittee shall notify the Administrator at least 7 calendar days prior to refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. This notification, including the written documentation, may also be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to the refilling. **(40 CFR 63.655(h)(2)(i)(B))**

b. In order to afford the Administrator the opportunity to have an observer present, the permittee shall notify the Administrator of any seal gap measurements on a storage vessel equipped with an external floating roof. The notification shall be made in writing at least 30 calendar days in advance of any seal gap measurements required by 40 CFR 63.120(b)(1 or 2). **(40 CFR 63.655(h)(2)(ii))**

3. The permittee shall submit the information specified in paragraphs 40 CFR 63.655(h)(6)(i-iii), as applicable. For existing sources, this information shall be submitted in the initial Notification of Compliance Status report. For a new source, the information shall be submitted with the application for approval of construction or reconstruction required by 40 CFR 63.5(d). The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal. **(40 CFR 63.655(h)(6))**

a. The determination of applicability of 40 CFR Part 63, Subpart CC to petroleum refining process units that are designed and operated as flexible operation units. **(40 CFR 63.655(h)(6)(i)**

b. The determination of applicability of 40 CFR Part 63, Subpart CC to any storage vessel for which use varies from year to year. **(40 CFR 63.655(h)(6)(ii))**

c. The determination of applicability of 40 CFR Part 63, Subpart CC to any distillation unit for which use varies from year to year. **(40 CFR 63.655(h)(6)(iii))**

Internal Floating Roof

1. The permittee, if elects to comply with 40 CFR 63.646 by using a fixed roof and an internal floating roof or by using an external floating roof converted to an internal floating roof, shall submit the results of each inspection conducted in accordance with 40 CFR 63.120(a) in which a failure is detected in the control equipment. **(40 CFR 63.655(g)(2))**

a. For vessels for which annual inspections are required under 40 CFR 63.120(a)(2)(i) or 40 CFR 63.120(a)(3)(ii), the specifications and requirements listed in paragraphs 40 CFR 63.655(g)(2)(i)(A-C) apply. **(40 CFR 63.655(g)(2)(i))**

i. A failure is defined as any time in which the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached from the internal floating roof; or there are holes, tears, or other openings in the seal or seal fabric; or there are visible gaps between the seal and the wall of the storage vessel. **(40 CFR 63.655(g)(2)(i)(A))**

ii. Except as provided in paragraph 40 CFR 63.655(g)(2)(i)(C), each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description

of the failure. The Periodic Report shall also describe the nature of and date the repair was made or the date the storage vessel was emptied. **(40 CFR 63.655(g)(2)(i)(B))**

b. For vessels for which inspections are required under 40 CFR 63.120(a)(2)(ii), 40 CFR 63.120(a)(3)(i), or 40 CFR 63.120(a)(3)(iii) (i.e., internal inspections), the specifications and requirements listed in paragraphs 40 CFR 63.655(g)(2)(ii)(A and B) apply. **(40 CFR 63.655(g)(2)(ii))**
   i. A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if one has been installed) has holes, tears, or other openings in the seal or the seal fabric; or, for a storage vessel that is part of a new source, the gaskets no longer close off the liquid surface from the atmosphere; or, for a storage vessel that is part of a new source, the slotted membrane has more than a 10% open area. **(40 CFR 63.655(g)(2)(ii)(A))**

2. The permittee, if elects to comply with 40 CFR 63.646 by using an external floating roof converted to an internal floating roof shall comply with the periodic reporting requirements of paragraph 40 CFR 63.655(g)(2). **(40 CFR 63.655(g)(4))**

External Floating Roof

1. For external floating roof tanks, permittee shall meet the periodic reporting requirements specified in paragraphs 40 CFR 63.655(g)(3)(i-iii). **(40 CFR 63.655(g)(3))**
2. The permittee shall submit, as part of the Periodic Report, documentation of the results of each seal gap measurement made in accordance with 40 CFR 63.120(b) in which the seal and seal gap requirements of 40 CFR 63.120(b)(3, 4, 5, or 6) are not met. This documentation shall include the information specified in paragraphs 40 CFR 63.655(g)(3)(i)(A-D). **(40 CFR 63.655(g)(3)(i))**
   a. The date of the seal gap measurement. **(40 CFR 63.655(g)(3)(i)(A))**
   b. The raw data obtained in the seal gap measurement and the calculations described in 40 CFR 63.120(b)(3 and 4). **(40 CFR 63.655(g)(3)(i)(B))**
   c. A description of any seal condition specified in 40 CFR 63.120(b)(5 or 6) that is not met. **(40 CFR 63.655(g)(3)(i)(C))**
   d. A description of the nature of and date the repair was made, or the date the storage vessel was emptied. **(40 CFR 63.655(g)(3)(i)(D))**
3. The permittee shall submit, as part of the Periodic Report, documentation of any failures that are identified during visual inspections required by 40 CFR 63.120(b)(10). This documentation shall meet the specifications and requirements in paragraphs 40 CFR 63.655(g)(3)(iii)(A) and (g)(3)(iii)(B). **(40 CFR 63.655(g)(3)(iii))**
   a. A failure is defined as any time in which the external floating roof has defects; or the primary seal has holes or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or, for a storage vessel that is part of a new source, the gaskets no longer close off the liquid surface from the atmosphere; or, for a storage vessel that is part of a new source, the slotted membrane has more than 10% open area. **(40 CFR 63.655(g)(3)(iii)(A))**

8.E. 40 CFR Part 60, Subpart Kb- IFR Storage Tanks Reporting.

The permittee shall use the following approved formats and procedures for the reporting requirements referenced in FGIFRTANKS-S1. Alternative formats must be approved by the AQD District Supervisor.

1. The permittee of each storage vessel as specified in 40 CFR 60.112b(a) shall keep records and furnish reports as required by paragraphs 40 CFR60.115b(a, b, or c) depending upon the control equipment installed to meet the requirements of 40 CFR 60.112b. **(40 CFR 60.115b)**
2. After installing control equipment in accordance with 40 CFR 60.112b(a)(1) (fixed roof and internal floating roof), the permittee shall meet the following requirements. **(40 CFR 60.115b(a))**
   a. Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of 40 CFR 60.112b(a)(1) and 40 CFR 60.113b(a)(1). This report shall be an attachment to the notification required by 40 CFR 60.7(a)(3). **(40 CFR 60.115b(a)(1))**
   b. If any of the conditions described in 40 CFR 60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR 60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made. **(40 CFR 60.115b(a)(3))**

c. After each inspection required by 40 CFR 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 40 CFR 60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR 61.112b(a)(1) or 40 CFR 60.113b(a)(3) and list each repair made. **(40 CFR 60.115b(a)(4))**

8.F. The permittee shall use the following approved formats and procedures for the reporting requirements referenced in FGEFRTANKS-S1. Alternative formats must be approved by the AQD District Supervisor.

40 CFR Part 60, Subpart Kb- EFR Storage Tanks Reporting.

1. After installing control equipment in accordance with 40 CFR 60.112b(a)(2) (external floating roof), the permittee shall meet the following requirements. **(40 CFR 60.115b(b))**
   a. Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of 40 CFR 60.112b(a)(2) and 40 CFR 60.113b(b)(2, 3, and 4). This report shall be an attachment to the notification required by 40 CFR 60.7(a)(3). **(40 CFR 60.115b(b)(1))**
   b. Within 60 days of performing the seal gap measurements required by 40 CFR 60.113b(b)(1), furnish the Administrator with a report that contains: **(40 CFR 60.115b(b)(2))**
      i. The date of measurement.
      ii. The raw data obtained in the measurement.
      iii. The calculations described in 40 CFR 60.113b(b)(2 and 3). **(40 CFR 60.115b(b)(2)(i)-(iii))**
   c. After each seal gap measurement that detects gaps exceeding the limitations specified by 40 CFR 60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph 40 CFR 60.115b(b)(2) and the date the vessel was emptied or the repairs made and date of repair. **(40 CFR 60.115b(b)(4))**

8.G. The permittee shall use the following approved formats and procedures for the reporting requirements referenced in FGPROCUNITS-S1. Alternative formats must be approved by the AQD District Supervisor.

40 CFR Part 63, Subpart CC- Refinery MACT 1 Leak Detection and Repair Reporting

1. The permittee subject to the leak standards of 40 CFR 63.648 shall comply with the recordkeeping and reporting provisions in paragraphs 40 CFR 63.655(d)(1-6). **(40 CFR 63. 655(d))**
   a. The permittee shall comply with 40 CFR 60.486 and 40 CFR 60.487 of 40 CFR Part 60, Subpart VV except as specified in paragraph 40 CFR 63.655(d)(1)(i); or 40 CFR 63.181 and 40 CFR 63.182 of 40 CFR Part 63, Subpart H except for 40 CFR 63.182(b), 40 CFR 63.182(c)(2), and 40 CFR 63.182(c)(4). **(40 CFR 63.655(d)(1))**
      i. The signature of the owner or operator (or designate) whose decision it was that a repair could not be effected without a process shutdown is not required to be recorded. Instead, the name of the person whose decision it was that a repair could not be effected without a process shutdown shall be recorded and retained for five years. **(R336.1213(3)(b(2), (40 CFR 63.655(d)(1)(i))**
   b. The Notification of Compliance Status report required by 40 CFR 63.182(c) of Subpart H and the initial semiannual report required by 40 CFR 60.487(b) of 40 CFR Part 60, Subpart VV shall be submitted within 150 days of the compliance date specified in 40 CFR 63.640(h); the requirements of 40 CFR Part 63, Subpart H are summarized in table 3 of 40 CFR Part 63, Subpart CC. **(40 CFR 63.655(d)(2))**
   c. The permittee who determines that a compressor qualifies for the hydrogen service exemption in 40 CFR 63.648 shall also keep a record of the demonstration required by 40 CFR 63.648. **(40 CFR 63.655(d)(3))**
   d. The permittee must keep a list of identification numbers for valves that are designated as leakless per 40 CFR 63.648(c)(10). **(40 CFR 63.655(d)(4))**
   e. The permittee must identify, either by list or location (area or refining process unit), equipment in organic HAP service less than 300 hours per year within refining process units subject to 40 CFR Part 63, Subpart CC. **(40 CFR 63.655(d)(5))**
   f. The permittee must keep a list of reciprocating pumps and compressors determined to be exempt from seal requirements as per 40 CFR 63.648(f) and 40 CFR 63.648(i). **(40 CFR 63.655(d)(6))**

2. The permittee shall submit the reports listed in paragraphs 40 CFR 63.655(e)(1) through (e)(3) except as provided in paragraph 40 CFR 63.655(h)(5), and shall keep records as described in paragraph 40 CFR 63.655(i). **(40 CFR 63.655(e))**
   a. A Notification of Compliance Status report as described in paragraph 40 CFR 63.655(f); **(40 CFR 63.655(e)(1))**
   b. Periodic Reports as described in paragraph 40 CFR 63.655(g); and **(40 CFR 63.655(e)(2))**
   c. Other reports as described in paragraph 40 CFR 63.655(h). **(40 CFR 63.655(e)(2))**
3. The permittee shall submit a Notification of Compliance Status report within 150 days after the compliance dates specified in 40 CFR 63.640(h) with the exception of Notification of Compliance Status reports submitted to comply with 40 CFR 63.640(l)(3). Notification of Compliance Status reports required by 40 CFR 63.640(l)(3) shall be submitted according to paragraph 40 CFR 63.655(f)(6). This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination of the three. If the required information has been submitted before the date 150 days after the compliance date specified in 40 CFR 63.640(h), a separate Notification of Compliance Status report is not required within 150 days after the compliance dates specified in 40 CFR 63.640(h). If the permittee submits the information specified in paragraphs 40 CFR 63.655(f)(1-5) at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information. **(40 CFR 63.655(f))**
   a. The Notification of Compliance Status report shall include the information specified in paragraphs 40 CFR 655(f)(1)(i) through (f)(1)(v). **(40 CFR 63.655(f)(1))**
      i. For equipment leaks complying with 40 CFR 63.648(c) (i.e., complying with the requirements of 40 CFR Part 63, Subpart H of this part), the Notification of Compliance Report Status report information required by 40 CFR 63.182(c) and whether the percentage of leaking valves will be reported on a process unit basis or a source wide basis. **(40 CFR 63.655(f)(1)(v))**
   b. If initial performance tests are required by 40 CFR 63.643 through 40 CFR 63.653 of 40 CFR Part 63, Subpart CC, the Notification of Compliance Status report shall include one complete test report for each test method used for a particular source. **(40 CFR 63.655(f)(2))**
      i. For additional tests performed using the same method, the results specified in paragraph 40 CFR 63.655(f)(1) shall be submitted, but a complete test report is not required. **(40 CFR 63.655(f)(2)(i))**
      ii. A complete test report shall include a sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method. **(40 CFR 63.655(f)(2)(ii))**
      iii. Performance tests are required only if specified by 40 CFR 63.643 through 40 CFR 63.653. Initial performance tests are required for some kinds of emission points and controls. Periodic testing of the same emission point is not required. **(40 CFR 63.655(f)(2)(iii))**
   c. Results of any continuous monitoring system performance evaluations shall be included in the Notification of Compliance Status report. **(40 CFR 63.655(f)(4))**
4. The permittee shall submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in paragraphs 40 CFR 63.655(g)(1-6) occur. The first 6-month period shall begin on the date the Notification of Compliance Status report is required to be submitted. A Periodic Report is not required if none of the compliance exceptions specified in paragraphs 40 CFR 63.655(g)(1-6) occurred during the 6-month period unless emissions averaging is utilized. Quarterly reports must be submitted for emission points included in emissions averages, as provided in paragraph 40 CFR 63.655(g)(8). The permittee may submit reports required by other regulations in place of or as part of the Periodic Report required by this paragraph if the reports contain the information required by paragraphs 40 CFR 63.655(g)(1-8). **(40 CFR 63.655(g))**
   a. If a performance test for determination of compliance for a new emission point subject to 40 CFR Part 63, Subpart CC, or for an emission point that has changed from Group 2 to Group 1 is conducted during the period covered by a Periodic Report, the results of the performance test shall be included in the Periodic Report. **(40 CFR 63.655(g)(7))**
      i. Results of the performance test shall include the percentage of emissions reduction or outlet pollutant concentration reduction (whichever is needed to determine compliance) and the values of the monitored operating parameters. **(40 CFR 63.655(g)(7)(i))**
      ii. The complete test report shall be maintained onsite. **(40 CFR 63.655(g)(7)(ii)**

8.H. The permittee shall use the following approved formats and procedures for the reporting requirements referenced in FGPROCVENTS-S1. Alternative formats must be approved by the AQD District Supervisor.

40 CFR Part 63, Subpart CC- Refinery MACT 1 Miscellaneous Process Vents Reporting

1. The permittee shall submit the reports listed in paragraphs 40 CFR 63.655 (e)(1) through (e)(3) except as provided in paragraph 40 CFR 63.655(h)(5), and shall keep records as described in paragraph 40 CFR 63.655(i). **(40 CFR 63.655(e))**
   a. A Notification of Compliance Status report as described in 40 CFR 63.655(f);**(40 CFR 63.655(e)(1))**
   b. Periodic Reports as described in 40 CFR 63.655(g); and **(40 CFR 63.655(e)(2))**
   c. Other reports as described in paragraph 40 CFR 63.655(h). **(40 CFR 63.655(e)(3))**
2. The permittee shall submit a Notification of Compliance Status report within 150 days after the compliance dates specified in 40 CFR 63.640(h) with the exception of Notification of Compliance Status reports submitted to comply with 40 CFR 63.640(l)(3). Notification of Compliance Status reports required by 40 CFR 63.640(l)(3) shall be submitted according to paragraph 40 CFR 63.655(f)(6). This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination of the three. If the required information has been submitted before the date 150 days after the compliance date specified in 40 CFR 63.640(h), a separate Notification of Compliance Status report is not required within 150 days after the compliance dates specified in 40 CFR 63.640(h). If the permittee submits the information specified in paragraphs 40 CFR 63.655(f)(1-5) of this section at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information. **(40 CFR 63.655(f))**
   a. The Notification of Compliance Status report shall include the information specified in paragraphs 40 CFR 63.655(f)(1)(ii) through (f)(1)(iv). **(40 CFR 63.655(f)(1))**
      i. For miscellaneous process vents, identification of each miscellaneous process vent subject to 40 CFR Part 63, Subpart CC, whether the process vent is Group 1 or Group 2, and the method of compliance for each Group 1 miscellaneous process vent that is not included in an emissions average (e.g., use of a flare or other control device meeting the requirements of 40 CFR 63.643(a). **(40 CFR 63.655(f)(1)(ii))**
      ii. For miscellaneous process vents controlled by control devices required to be tested under 40 CFR 63.645 and 40 CFR 63.116(c), performance test results including the information in paragraphs 40 CFR 63.655(f)(1)(iii)(A and B). Results of a performance test conducted prior to the compliance date of 40 CFR Part 63, Subpart CC can be used provided that the test was conducted using the methods specified in 40 CFR 63.645 and that the test conditions are representative of current operating conditions. **(40 CFR 63.655(f)(1)(iii))**
         A. The percentage of reduction of organic HAPs or TOC, or the outlet concentration of organic HAPs or TOC (ppm by volume on a dry basis corrected to 3% oxygen), determined as specified in 40 CFR 63.116(c); and **(40 CFR 63.655(f)(1)(iii)(A))**
         B. The value of the monitored parameters specified in table 10 of 40 CFR Part 63, Subpart CC, or a site-specific parameter approved by the permitting authority, averaged over the full period of the performance test. **(40 CFR 63.655(f)(1)(iii)(B))**
      iii. For miscellaneous process vents controlled by flares, performance test results including the information in paragraphs 40 CFR 63.655(f)(1)(iv)(A and B); **(40 CFR 63.655(f)(1)(iv))**
         A. All visible emission readings, heat content determinations, flow rate measurements, and exit Velocity determinations made during the compliance determination required by 40 CFR 63.645 and 40 CFR 63.116(a), and **(40 CFR 63.655(f)(1)(iv)(A))**
         B. A statement of whether a flame was present at the pilot light over the full period of the compliance determination. **(40 CFR 63.655(f)(1)(iv)(B))**
   b. If initial performance tests are required by 40 CFR 63.643 through 40 CFR 63.653 of 40 CFR, Part 63, Subpart CC, the Notification of Compliance Status report shall include one complete test report for each test method used for a particular source. **(40 CFR 63.655(f)(2))**
      i. For additional tests performed using the same method, the results specified in paragraph 40 CFR 63.655(f)(1) shall be submitted, but a complete test report is not required. **(40 CFR 63.655(f)(2)(i))**
      ii. A complete test report shall include a sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data

sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method. **(40 CFR 63.655(f)(2)(ii))**

iii. Performance tests are required only if specified by 40 CFR 63.643 through 40 CFR 64.653 of 40 CFR Part 63, Subpart CC. Initial performance tests are required for some kinds of emission points and controls. Periodic testing of the same emission point is not required. **(40 CFR 63.655(f)(2)(iii))**

c. For each monitored parameter for which a range is required to be established 40 CFR 63.644 for miscellaneous process vents, the Notification of Compliance Status report shall include the information in paragraphs 40 CFR 63.655(f)(3)(i-iii). **(40 CFR 63.655(f)(3))**

i. The specific range of the monitored parameter(s) for each emission point; **(40 CFR 63.655(f)(3)(i))**

ii. The rationale for the specific range for each parameter for each emission point, including any data and calculations used to develop the range and a description of why the range ensures compliance with the emission standard. **(40 CFR 63.655(f)(3)(ii))**

A. If a performance test is required by 40 CFR Part 63, Subpart CC for a control device, the range shall be based on the parameter values measured during the performance test supplemented by engineering assessments and manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of permitted parameter values. **(40 CFR 63.655(f)(3)(ii)(A))**

B. If a performance test is not required by 40 CFR Part 63, Subpart CC for a control device, the range may be based solely on engineering assessments and manufacturers' recommendations. **(40 CFR 63.655(f)(3)(ii)(B))**

iii. A definition of the source's operating day for purposes of determining daily average values of monitored parameters. The definition shall specify the times at which an operating day begins and ends. **(40 CFR 63.655(f)(3)(iii))**

d. Results of any continuous monitoring system performance evaluations shall be included in the Notification of Compliance Status report. **(40 CFR 63.655(f)(4))**

e. Notification of Compliance Status reports required by 40 CFR 63.640(l)(3) shall be submitted no later than 60 days after the end of the 6-month period during which the change or addition was made that resulted in the Group 1 emission point or the existing Group 1 storage vessel was brought into compliance, and may be combined with the periodic report. Six-month periods shall be the same 6-month periods specified in 40 CFR 63.655(g). The notification of Compliance Status report shall include the information specified in paragraphs 40 CFR 63.655(f)(1-5). This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, as part of the periodic report, or in any combination of these four. If the required information has been submitted before the date 60 days after the end of the 6-month period in which the addition of the Group 1 emission point took place, a separate Notification of Compliance Status report is not required within 60 days after the end of the 6-month period. If the permittee submits the information specified in paragraphs 40 CFR 63.655(f)(1-5) at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information. **(40 CFR 63.655(f)(6))**

3. The permittee shall submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in paragraphs 40 CFR 63.655(g)(1-6) occur. The first 6-month period shall begin on the date the Notification of Compliance Status report is required to be submitted. The permittee may submit reports required by other regulations in place of or as part of the Periodic Report required by this paragraph if the reports contain the information required by paragraphs 40 CFR 63.655(g)(6-7). **(40 CFR 63.655(g))**

a. For miscellaneous process vents for which continuous parameter monitors are required by 40 CFR Part 63, Subpart CC, periods of excess emissions shall be identified in the Periodic Reports and shall be used to determine compliance with the emission standards. **(40 CFR 63.655(g)(6))**

i. Period of excess emission means any of the following conditions: **(40 CFR 63.655(g)(6)(i))**

A. An operating day when the daily average value of a monitored parameter, except presence of a flare pilot flame, is outside the range specified in the Notification of Compliance Status report. Monitoring data recorded during periods of monitoring system breakdown, repairs, calibration checks and zero (low-level) and high-level adjustments shall not be used in computing daily average values of monitored parameters. **(40 CFR 63.655(g)(6)(i)(A))**

B. An operating day when all pilot flames of a flare are absent. **(40 CFR 63.655(g)(6)(i)(B))**

C. An operating day when monitoring data required to be recorded in paragraphs 40 CFR 63,655(i)(3)(i and ii) are available for less than 75% of the operating hours. **(40 CFR 63.655(g)(6)(i)(C))**

D. For data compression systems approved under paragraph 40 CFR 63.655(h)(5)(iii), an operating day when the monitor operated for less than 75% of the operating hours or a day when less than 18 monitoring values were recorded. **(40 CFR 63.655(g)(6)(i)(D))**

ii. For miscellaneous process vents, excess emissions shall be reported for the operating parameters specified in table 10 of 40 CFR Part 63, Subpart CC unless other site-specific parameter(s) have been approved by the operating permit authority.**(40 CFR 63.655(g)(6)(ii))**

iii. Periods of startup and shutdown that meet the definition of 40 CFR 63.641, and malfunction that meet the definition in 40 CFR 63.2 and periods of performance testing and monitoring system calibration shall not be considered periods of excess emissions. Malfunctions may include process unit, control device, or monitoring system malfunctions. **(40 CFR 63.655(g)(6)(iii))**

b. If a performance test for determination of compliance for a new emission point subject to 40 CFR Part 63, Subpart CC or for an emission point that has changed from Group 2 to Group 1 is conducted during the period covered by a Periodic Report, the results of the performance test shall be included in the Periodic Report. **(40 CFR 63.655(g)(7))**

i. Results of the performance test shall include the percentage of emissions reduction or outlet pollutant concentration reduction (whichever is needed to determine compliance) and the values of the monitored operating parameters. **(40 CFR 63.655(g)(7)(i))**

ii. The complete test report shall be maintained onsite. **(40 CFR 63.655(g)(7)(ii))**

4. The permittee shall submit other reports as specified in 40 CFR Part 63, Subpart A as follows: **(40 CFR 63.655(h))**

a. The permittee who requests approval to monitor a different parameter than those listed in 40 CFR 63.644 for miscellaneous process vents shall submit the information specified in paragraphs 40 CFR 63.655(h)(4)(i-iii). For new or reconstructed sources, the information shall be submitted with the application for approval of construction or reconstruction required by 40 CFR 63.5(d)A and for existing sources, and the information shall be submitted no later than 18 months prior to the compliance date. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal. **(40 CFR 63.655(h)(4))**

i. A description of the parameter(s) to be monitored to determine whether excess emissions occur and an explanation of the criteria used to select the parameter(s). **(40 CFR 63.655(h)(4)(i))**

ii. A description of the methods and procedures that will be used to demonstrate that the parameter can be used to determine excess emissions and the schedule for this demonstration. The permittee must certify that they will establish a range for the monitored parameter as part of the Notification of Compliance Status report required in paragraphs 40 CFR 63.655(e and f). **(40 CFR 63.655(h)(4)(ii))**

iii. The frequency and content of monitoring, recording, and reporting if: monitoring and recording are not continuous; or if periods of excess emissions, as defined in paragraph 40 CFR 63.655(g)(6), will not be identified in Periodic Reports required under paragraphs 40 CFR 63.655(e and g). The rationale for the proposed monitoring, recording, and reporting system shall be included. **(40 CFR 63.655(h)(4)(iii))**

The permittee shall use the following approved formats and procedures for the reporting requirements referenced in EUNSPSQQQ-S1. Alternative formats must be approved by the AQD District Supervisor.

8.I. 40 CFR Part 60, Subpart QQQ – VOC Emissions from Refinery Wastewater Systems Reporting requirements.

1. The permittee electing to comply with the provisions of 40 CFR 60.693 shall notify the EPA Administrator of the alternative standard selected in the report required in 40 CFR 60.7. **(40 CFR 60.698(a))**
2. The permittee shall submit to the Administrator within 60 days after initial startup a certification that the equipment necessary to comply with these standards has been installed and that the required initial inspections or tests of process drains, sewer lines, junction boxes, oil-water separators, and closed vent systems and control devices have been carried out in accordance with these standards. Thereafter, the permittee shall submit to the Administrator semiannually a certification that all of the required inspections have been carried out in accordance with these standards. **(40 CFR 60.698(b)(1))**

a. The permittee that uses a flare shall submit to the Administrator within 60 days after initial startup, as required under 40 CFR 60.8(a), a report of the results of the performance test required in 40 CFR 60.696(c). **(40 CFR 60.698(b)(2))**

3. A report that summarizes all inspections when a water seal was dry or otherwise breached, when a drain cap or plug was missing or improperly installed, or when cracks, gaps, or other problems were identified that could result in VOC emissions, including information about the repairs or corrective action taken, shall be submitted initially and semiannually thereafter to the Administrator. **(40 CFR 60.698(c))**
4. As applicable, a report shall be submitted semiannually to the EPA Administrator that indicates: **(40 CFR 60.698(d))**
   a. Each 3-hour period of operation during which the average temperature of the gas stream in the combustion zone of a thermal incinerator, as measured by the temperature monitoring device, is more than 28 °C (50°F) below the design combustion zone temperature, **(40 CFR 60.698(d)(1))**
   b. Each 3-hour period of operation during which the average temperature of the gas stream immediately before the catalyst bed of a catalytic incinerator, as measured by the temperature monitoring device, is more than 28 °C (50 °F) below the design gas stream temperature, and any 3-hour period during which the average temperature difference across the catalyst bed (i.e., the difference between the temperatures of the gas stream immediately before and after the catalyst bed), as measured by the temperature monitoring device, is less than 80% of the design temperature difference, or, **(40 CFR 60.698(d)(2))**
   c. Each 3-hour period of operation during which the average VOC concentration level or reading of organics in the exhaust gases from a carbon adsorber is more than 20% greater than the design exhaust gas concentration level or reading. **(40 CFR 60.698(d)(3))**
      i. Each 3-hour period of operation during which the average volatile organic compound concentration level or reading of organics in the exhaust gases from a carbon adsorber which is regenerated directly onsite is more than 20% greater than the design exhaust gas concentration level or reading. **(40 CFR 60.698(d)(3)(i))**
      ii. Each occurrence when the carbon in a carbon adsorber system that is not regenerated directly onsite in the control device is not replaced at the predetermined interval specified in 40 CFR 60.695(a)(3)(ii). **(40 CFR 60.698(d)(3)(ii))**
5. If compliance with the provisions of 40 CFR Part 60, Subpart QQQ is delayed pursuant to 40 CFR 60.692-7, the notification required under 40 CFR 60.7(a)(4) shall include the estimated date of the next scheduled refinery or process unit shutdown after the date of notification and the reason why compliance with the standards is technically impossible without a refinery or process unit shutdown. **(40 CFR 60.698(e))**