

Michigan Refining Division



**Marathon Petroleum Company LP**

1001 S Oakwood  
Detroit, MI 48217  
Telephone 313/843-9100

August 24, 2020

Ms. Caryn Owens  
Michigan Department of Environment, Great Lakes, and Energy  
Air Quality Division  
Cadillac District Office  
120 West Chapin Street  
Cadillac, MI 49601

RECEIVED  
AQD

AUG 26 2020

MACES \_\_\_\_\_  
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RE: Rule 216(2) Minor Modification to Incorporate PTI 57-20 – MI-ROP-A9831-2012c

Dear Ms. Owens:

Attached please find a Rule 216(2) minor modification application for MI-ROP-A9831-2012c to incorporate the conditions in PTI 57-20. We received formal notification on July 27, 2020 that PTI 57-20 was issued. Marathon Petroleum Company is in compliance with the revised conditions in the PTI.

The attached application submittal includes a signed C-001 form, the M-001 form, and a mark-up of the permit conditions.

If you should have any questions on this application, please contact Kay Bedenis at 313-297-6289 or [kfbedenis@marathonpetroleum.com](mailto:kfbedenis@marathonpetroleum.com).

Sincerely,

A handwritten signature in blue ink that reads "Honor F. Sheard".

Honor F. Sheard  
Deputy Assistant Secretary

Attachments

c. Jorge Acevedo, EGLE-AQD Detroit District Office (*via email*)



Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division

**RENEWABLE OPERATING PERMIT APPLICATION  
C-001: CERTIFICATION**

AUG 26 2020

MACES  
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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
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Stationary Source Name Marathon Petroleum Company LP	
City Detroit	County Wayne

<b>SUBMITTAL CERTIFICATION INFORMATION</b>	
1. Type of Submittal <i>Check only one box.</i>	
<input type="checkbox"/> Initial Application (Rule 210)	<input checked="" type="checkbox"/> Notification / Administrative Amendment / Modification (Rules 215/216)
<input type="checkbox"/> Renewal (Rule 210)	<input type="checkbox"/> Other, describe on AI-001
2. If this ROP has more than one Section, list the Section(s) that this Certification applies to <u>1</u>	
3. Submittal Media <input type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Disk <input checked="" type="checkbox"/> 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	

<b>CONTACT INFORMATION</b>	
Contact Name Kay Bedenis	Title Adv. Environmental Professional
Phone number 313-268-0936	E-mail address kfbedenis@marathonpetroleum.com

<b>This form must be signed and dated by a Responsible Official.</b>				
Responsible Official Name Honor F. Sheard			Title Assistant Deputy Secretary	
Mailing address 1001 S. Oakwood				
City Detroit	State MI	ZIP Code 48217	County Wayne	Country U.S.A.
<b>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.</b>				
 Signature of Responsible Official			8/24/2020 Date	



AUG 26 2020

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

COPIES FILE \_\_\_\_\_ MAERS \_\_\_\_\_

*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 1300 S. Fort Street	6. City Detroit	
<p>7. Submittal Type - <i>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.</i></p> <p><input type="checkbox"/> Rule 215(1) Notification of change. Complete Items 8 – 10 and 14</p> <p><input type="checkbox"/> Rule 215(2) Notification of change. Complete Items 8 – 10 and 14</p> <p><input type="checkbox"/> Rule 215(3) Notification of change. Complete Items 8 – 11 and 14</p> <p><input type="checkbox"/> Rule 215(5) Notification of change. Complete Items 8 – 10 and 14</p> <p><input type="checkbox"/> Rule 216(1)(a)(i)-(iv) Administrative Amendment. Complete Items 8 – 10 and 14</p> <p><input type="checkbox"/> Rule 216(1)(a)(v) Administrative Amendment. Complete Items 8 – 14. Results of testing, monitoring &amp; recordkeeping must be submitted. See detailed instructions.</p> <p><input checked="" type="checkbox"/> Rule 216(2) Minor Modification. Complete Items 8 – 12 and 14</p> <p><input type="checkbox"/> Rule 216(3) Significant Modification. Complete Items 8 – 12 and 14, and provide any additional information needed on ROP application forms. See detailed instructions.</p> <p><input type="checkbox"/> Rule 216(4) State-Only Modification. Complete Items 8 – 12 and 14</p>		
8. Effective date of the change. (MM/DD/YYYY) <i>See detailed instructions.</i> 07/27/2020		9. Change in emissions? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>10. Description of Change - <i>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).</i></p> <p>Change to ROP language for FGFLARE-S1. Condition VI.13 modified to allow monitoring equipment to be updated. Reference to EUCPFLARE-S1 removed as it was permanently removed from service. Typos corrected in Condition VI.8 (EG changed to EU). Language in Conditions IX.1 and IX.2 updated to match ROP. Conditions III.14 and III.15 removed as were duplicated in Section IX.</p>		
11. New Source Review Permit(s) to Install (PTI) associated with this application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If Yes, enter the PTI Number(s) 57-20 - - - - -		
12. Compliance Status - <i>A narrative compliance plan, including a schedule for compliance, must be submitted using an AI-001 if any of the following are checked No.</i>		
a. Is the change identified above in compliance with the associated applicable requirement(s)?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b. Will the change identified above continue to be in compliance with the associated applicable requirement(s)?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c. If the change includes a future applicable requirement(s), will timely compliance be achieved?		<input type="checkbox"/> Yes <input type="checkbox"/> No
13. Operator's Additional Information ID - <i>Create an Additional Information (AI) ID for the associated AI-001 form used to provide supplemental information.</i>		AI
14. Contact Name Kay Bedenis	Telephone No. 313-297-6289	E-mail Address kfbedenis@marathonpetroleum.com
15. This submittal also updates the ROP renewal application submitted on 01/23/2017 <i>(If yes, a mark-up of the affected pages of the ROP must be attached.)</i>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A

## EMISSION UNIT SPECIAL CONDITIONS

## EMISSION UNIT SUMMARY TABLE

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

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Installation Date / Modification Date</b>	<b>Flexible Group ID</b>
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
<del>EUCPFLARE-S1</del>	<del>Cracking Plant Flare. Area 25. Permit: 63-08E</del>	<del>02/01/1949 11/05/2012</del>	<del>FGFLARES-S1 FGREFINEFLARES-S1</del>

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 336.1291.

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
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, <del>EUCPFLARE-S1</del> EU-COKERFLARE-S1

## 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, and EU-ALKYFLARE-S1, ~~and EU-CPFLARE-S1~~

Permit: 63-08E

**Emission Unit:** EUCRUDEFLARE-S1, EUUNIFFLARE-S1, EUALKYFLARE-S1, ~~EUCPFLARE-S1~~, EUCOKERFLARE-S1

### POLLUTION CONTROL EQUIPMENT

NA

### I. EMISSION LIMIT(S)

- 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). **(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 <sub>2</sub> S in refinery fuel gas burned <sup>a,b</sup>	160 ppmv on a 3 hour rolling average basis	Three hour rolling average	Each flare in FGFLARES-S1	SC VI.1	<b>40 CFR60.103a(h)</b>
<p><sup>a</sup> 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</p> <p><sup>b</sup> 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.</p>					

### III. PROCESS/OPERATIONAL RESTRICTION(S)

- 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. **(R 336.1205, R 336.2802, 40 CFR 52.21, Consent Order 01-40119)**
- 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.<sup>3</sup> **(R336.1201(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. **(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. **(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. **(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.<sup>3</sup> **(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. **(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 (**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 SO<sub>2</sub> or 500,000 scf of gas). (**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<sub>2</sub> or VOC, or more than 500,000 scf of gas)<sup>3</sup> (**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. (**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. (**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: **(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.<sup>3</sup>
- ~~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.<sup>2</sup> **(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.<sup>2</sup> **(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. **(40 CFR Part 60, Subpart A)**
2. The permittee shall equip and maintain each flare in FGFLARES-S1 with a pilot flame. **(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. **(R 336.1910, 40 CFR 60.18(c))**

#### **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 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<sub>2</sub>S in the fuel gas being burned. **(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. **(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. **(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. **(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. **(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. **(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. **(R 336.1205)**
8. The permittee shall install, maintain, and continuously operate, for EG-CRUDEFLARE, EG-UNIFFLARE, and 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. **(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:  $\pm 1\%$  of reading over the velocity range.
  - c. Accuracy:  $\pm 20\%$  of reading over the velocity range of 0.1-1 ft/s and  $\pm 5\%$  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. **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**
  - a. Turndown Ratio: 25:1.
  - b. Repeatability:  $\pm 1\%$  of reading over the range of the instrument.
  - c. Accuracy:  $\pm 1\%$  from 100% to 15 % of span,  $\pm 2\%$  from 15 % of span to 6 % of span,  $\pm 3\%$  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. **(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. **(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. **(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 concentration measurement chromatography system to monitor and record the composition of total hydrocarbon, methane, and TRS concentration in the vent gas to each flare in FGFLARES-S1 on a continuous basis. **(R 336.1201(3), 40 CFR 63.670(j))**
- a. The gas concentration measurement chromatography system shall be maintained to be accurate within 5% of full scale.
- b. The minimum sampling frequency shall be one sample every 15 30-minutes.
14. The permittee shall calculate and keep records of the annual emissions of PM, PM10, NO<sub>x</sub>, VOC, CO, SO<sub>2</sub>, sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>), hydrogen sulfide (H<sub>2</sub>S), 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. **(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<sub>x</sub>, VOC, CO, SO<sub>2</sub>, sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>), hydrogen sulfide (H<sub>2</sub>S), 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. **(R 336.1201(3))**

## VII. REPORTING

1. 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. **(R 336.1201(3), 40 CFR 60.7)**
2. 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. **(R 336.1205, R 336.2802, 40 CFR 52.21, Consent Order 01-40119)**
3. 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. **(R 336.1205, R 336.2802, 40 CFR 52.21, Consent Order 01-40119)**
4. 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. **(40 CFR Part 63, Subparts A and CC)**
5. 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). **(R 336.1201(3), R 336.2818, 40 CFR 52.21(r)(6)(v))**

#### **VIII. STACK/VENT RESTRICTION(S)**

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 63, Subparts A and Subpart CC, as they apply to FGFLARES-S1.<sup>2</sup> **(40 CFR Part 63, Subparts A and CC)**
2. The permittee shall comply with all provision of the federal Standards of Performance foref New Stationary Sources as specified in 40 CFR Part 60, Subparts A, J, and where applicable Ja, as they apply to FGFLARES-S1.<sup>2</sup> **(40 CFR Part 60 Subparts A and J/Ja)**

#### **Footnotes:**

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

<sup>3</sup> This condition is included at the request of the permittee.