MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

September 7, 2012

PERMIT TO INSTALL
81-12

ISSUED TO
Marathon Petroleum Company LP

LOCATED AT
1300 South Fort Street
Detroit, Michigan

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
A9831

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **June 1, 2012**	
DATE PERMIT TO INSTALL APPROVED: **September 7, 2012**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO_2e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H_2S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO_x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM less than 10 microns diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM less than 2.5 microns diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install 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 this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit 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 R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. 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 Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department 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 condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

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

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

12. 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 R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	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	11/9/2005	FGPROCUNITS-S1
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. Permits C-9603, 9604, 9605, 262-02	11/9/2005	FGPROCUNITS-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.			

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,

Flexible Group ID: FGPROCUNITS-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[2*]	3 hour rolling average basis	EU11-FCCU-S1	V1, VI4,VI5	**(40 CFR 60.102(a)(1), 40 CFR 63.1564, R 336.1213**)
2. Particulate Matter	66.6 Tons/year[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month.	EU11-FCCU-S1	V1,VI4,VI5,VI9	**(40 CFR 52.21(c) and (d))**
3. Carbon Monoxide	500 ppmv[2]	Hourly basis	EU11-FCCU-S1	VI2, VI7	**(40 CFR 60.103), (40 CFR 63.1565)**
4. Carbon Monoxide	573 Tons/year[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month.	EU11-FCCU-S1	VI2,VI7, VI9	**40 CFR 52.21(c) and (d))**
5. Sulfur Dioxide	70 ppmv[2]	Based upon 7day rolling average and 0% oxygen‡	EU11-FCCU-S1	VI2,VI6,	**(R336.1205(1)), (40 CFR 52.21(b)(3)), (40 CFR 52.21(c)&(d)), (55 FR 11029, Consent Order No. 01-40119)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
6. Sulfur Dioxide	35 ppmv[2]	Based upon 365 day rolling average and 0% oxygen	EU11-FCCU-S1	VI2, VI6	**(R 336.1205(1)), (40 CFR 52.21(b)(3)), (40 CFR 52.21(c)&(d)), (55 FR 11029, Consent Order No. 01-40119)**
7. Sulfur Dioxide	473 Tons/yr[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month.	EU11-FCCU-S1	VI2, VI6, VI9	**(40 CFR 52.21(c) and (d)**
8. NOx	123 ppmv[2]	Based upon 7 day rolling average and 0% oxygen‡	EU11-FCCU-S1	VI2, VI8	**(40 CFR 52.21) (R 336.1801(4)(g), (Consent Order No. 01-40119)**
9. NOx	70 ppmv[2]	Based upon 365 day rolling average and 0% oxygen	EU11-FCCU-S1	VI2, VI8	**(40 CFR 52.21), (R 336.1801(4)(g), (Consent Decree No. 4:01CV-40119-PVG)**
10. NOx	404 Tons/yr[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU11-FCCU-S1	VI2, VI8	**(40 CFR 52.21(c) and (d))**
11. Volatile Organic Compounds	18.7 Tons/yr[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU11-FCCU-S1	VI2, VI8, VI9	**(R 336.1205(1)), (R 336.1702(a)), (40 CFR 52.21(b)(3))**

‡ Note that the 7 day average limit does not apply during periods of hydrotreater outages if Marathon is operating in accordance with an approved Hydrotreater Outage Plan

* Compliance with this limit shall be considered compliance with the limits of 40 CFR 60.102(a)(1) which have been subsumed under this streamlined requirement.

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 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. **(40 CFR Part 63 Subparts A & UUU, R 336.1910)**

2. 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. **(R 336.1901, R 336.1910, R 336.1213(3))**

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 condition III.2.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.

3. The permittee shall conduct all necessary maintenance, consistent with the NH_3 Injection Plan, to keep all components of the ammonia injection system operating in a satisfactory manner at all times. **(R 336.1901, 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))**

1. Annually, the permittee shall verify the Particulate Matter 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, 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 336.2004(1)(m), R 336.1213(3))**

2. Once during the five years of this permit, the permittee shall verify the Volatile Organic Compounds 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, 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 336.2004(1)(m), R 336.1213(3))**

See Appendix 5-S1 of MI-ROP-A9831

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. **(R 336.2103(1), 40 CFR 60.105(a)(1), Paragraph 16 of Consent Decree 01-40119, 40 CFR 63 Subparts A & UUU)**

2. The permittee shall install, calibrate, maintain, and operate CEMS for measuring NOx, CO, 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, 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 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 336.1213(3), Consent Decree 01-40119)**

3. The permittee shall keep records of the process unit charge rate on a daily basis for EU11-FCCU-S1. **(R 336.1213(3), 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. (**40 CFR Part 60 Subparts A & J/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. (**40 CFR Part 60 Subparts A & J/Ja, 40 CFR Part 63 Subparts A and UUU)**

6. The permittee shall keep records of SO_2 emissions on a daily basis from the CEM for EU11-FCCU-S1. (**40 CFR Part 60 Subparts A & J/Ja, 40 CFR Part 63 Subparts A and UUU)**

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

8. The permittee shall keep records of NOx emissions on a daily basis from the CEM for EU11-FCCU-S1. **(Consent Order No. 01-40119, R 336.1213(3))**

9. The permittee shall calculate the CO, NOx, PM, VOC, and SO2 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. All records shall be made available to the Department upon request. **(40 CFR 52.21 (c) and (d))**

10. The permittee shall calculate the PM emission rate from EU11-FCCU-S1 per 1,000lb of coke burn off using a method acceptable to the AQD District Supervisor. All records shall be made available to the Department upon request. **(40 CFR Part 60 Subparts A & J/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:
    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?
    (40 CFR Part 63 Subparts A & UUU)

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. **(R 336.1901, R 336.1910)**

VII. REPORTING

1. NA

See Appendix 8-S1 of MI-ROP-A9831

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]	**40 CFR 52.21(c) & (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 J/Ja, as they apply to EU11-FCCU-S1. **(40 CFR Part 60 Subparts A & J/Ja)**

2. Permittee shall install, calibrate, maintain and operate continuous monitoring systems subject to the provisions of 40 CFR 60.105. **(40CFR 60.105)(a))**

3. The permittee shall monitor and record opacity from EU11-FCCU-S1on a continuous basis in a manner and with instrumentation acceptable to AQD. **(40CFR 60.105(a)(1))**

4. The permittee shall monitor and record carbon monoxide from EU11-FCCU-S1 on a continuous basis in a manner and with instrumentation acceptable to AQD. **(40CFR 60.105(a)(2))**

5. The permittee shall monitor and record sulfur dioxide from EU11-FCCU-S1on a continuous basis in a manner and with instrumentation acceptable to AQD. **(40CFR 60.105(a)(3))**

6. 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 40CFR 60.7 (d)) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, 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:
    a. The magnitude of excess emissions computed in accordance with Sec. 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.

7. Permittee shall comply with all applicable reporting requirements in 40 CFR 60.7. **(40 CFR 60.7)**

8. 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 336.1213(3)(b)(ii)**

9. 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. **(40 CFR Part 63 Subparts A and UUU)**

10. 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. **(40 CFR Part 63 Subparts A and UUU)**

11. 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). **(40 CFR Part 63 Subparts A & UUU)**

12. 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.[4] **(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).
[4] 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 60, Subpart J/Ja)

Flexible Group ID: FGPROCUNITS-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 treatement units, No. 1 and No. 2	250 parts per million by volume[2]	Based upon a 12 hour average at zero percent oxygen on a dry basis	EU42-43-SULRECOV-S1	VI1	**40 CFR 60.104(a)(2)**
2. SO_2 emissions from the thermal oxidizer that controls the tail gas treatement units, No. 1 and No. 2	23.17 pounds[2]	Hourly basis	EU42-43SULRECOV-S1	VI1	**40 CFR 60.104(a)(2)**
3. SO_2 emissions from the thermal oxidizer that controls the tail gas treatement units, No. 1 and No. 2	91 Tons per Year[2*]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU42-43SULRECOV-S1	VI1	**40 CFR 52.21(b)(3) R 336.1405 R 336.1213**
4. NOx emission rate from the thermal oxidizer	7.30 pounds[2]	Three hour average	EU42-43SULRECOV-S1	V1	**R 336.1201(3), 52.21 (a) &(b)**
5. Carbon Monoxide emission rate from the thermal oxidizer	10.73 pounds[2]	Three hour average	EU42-43SULRECOV-S1	V2	

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
6. Carbon Monoxide emission rate from the thermal oxidizer	5.0 Tons Per Year[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU42-43SULRECOV-S1	V2	
7. Particulate Matter emission rate from the thermal oxidizer	1.77 pounds[2]	Three hour average	EU42-43SULRECOV-S1	V3	**R 336.1201(3)**
8. Particulate Matter emission rate from the thermal oxidizer	7.8 Tons Per Year[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU42-43SULRECOV-S1	V3	**40 CFR 52.21(a)&(b) R 336.1201(3)**
9. Volatile Organic Compound emission rate from the thermal oxidizer	1.0 Ton Per Year[2]	Based upon a 12 month rolling time period as determined at the end of each calendar month	EU42-43SULRECOV-S1	V4	**R 336.1702(a) 40 CFR 52.21 (a)&(b)**

* Compliance with this limit shall be considered compliance with the limits of R 336.1405 which have been subsumed under this streamlined requirement.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Elemental sulfur produced	175 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	VI2	**R 336.1201(3), 40 CFR 52.21(b)(3), 40 CFR 52.21 (c) & (d)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The heat input capacity in the thermal oxidizer of EU42-43SULRECOV-S1 shall not exceed a maximum of 25 million BTUs per hour, on a daily average. (**R 336.1225, 40 CFR 52.21(b)(3), 40 CFR 52.21(c)&(d))**

2. 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. **(R 336.1225, 40 CFR 52.21(b)(3), 40 CFR 52.21 (c) & (d))**

3. The pemittee shall not operate 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 63, Subparts A and UUU. **(R 336.1201(3), R 336.1224, R 336.1225, R 336.1910, 40 CFR 52.21(c) & (d), 40 CFR Parts 60, 61, & 63)**

4. The permittee shall not operate EU42-43SULRECOV-S1 unless a minimum temperature of 1200 degrees Fahrenheit on an hourly average and minimum retention time of 1.0 second in the thermal oxidizer is maintained. **(R 336.1201(3), R 336.1224, R 336.1225, R 336.1910, 40 CFR 52.21(c) & (d), 40 CFR Parts 60, 61, & 63)**

5. 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, J, and where applicable Ja, as they apply to EU42-43SULRECOV-S1. **(40 CFR Part 60 Subparts A & J/Ja)**

6. 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 EU42-43SULRECOV-S1. **(40 CFR Part 63 Subparts A & UUU)**

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. **(40 CFR Part 63, Subparts A & 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. **(40 CFR Part 63, Subparts A & UUU)**

9. 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 except during periods of startup, shutdown, or malfunction unless the emissions are subject to monitoring.[4] **(NSPS J, 40 CFR 60.104(a)(2))**

10. 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.[4] **(40 CFR Part 60.11(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. 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 NOx 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 tests results to the AQD within 60 days following the last date of the test.[2] **(R 336.2001, R 336.2003, R 336.2004, 52.21)**

2. Once during the five years of this permit, 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, 52.21)**

3. Once during the five years of this permit, 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 336.2001, R 336.2003, R 336.2004, 52.21)**

4. Once during the five years of this permit, 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 336.2001, R 336.2003, R 336.2004, 52.21)**

See Appendix 5-S1 of MI-ROP-A9831

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 SO2 and oxygen emissions from EU42-43SULRECOV-S1 on a continuous basis. The permittee shall use the CEMS data for determining compliance with SC I.1.

2. 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. **(40 CFR 52.21(b)(3)), (40 CFR 52.21(c)&(d), R 336.1201(3))**

3. The permittee shall monitor and record the temperature from the thermal oxidizer on a continuous basis with instrumentation acceptable to AQD. **(R 336.1224,R336.1702(b), R 33.1901, R 336.1910, 40 CFR 52.21(c)&(d), R 336.1702(b), 40 CFR Part 60, Subparts A and J/Ja, R336.1201(3)**

4. The permittee shall monitor the amount of natural gas used in the thermal oxidizer on a daily average basis. **(R 336.1225, 40 CFR 52.21(b)(3), 40 CFR 52.21(c)&(d), 40 CFR Part 60 Subparts A and J/Ja, R 336.1201(3))**

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 60 Subparts A and J. 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. **(40 CFR Part 60 Subparts A&J/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. **(40 CFR Part 63 Subparts A & UUU)**

VII. REPORTING

1. NA

See Appendix 8-S1 of MI-ROP-A9831

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[2]	199.5[2]	**R 336.1201(3)**

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 EU42-43SULRECOV-S1. **(40 CFR Part 60 Subparts A & J/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. **(40 CFR Part 63 Subparts A & 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).
[4] This condition is included at the request of the permittee.

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 60, Subpart J and where applicable Subpart Ja)	EUCRUDEFLARE-S1, EUUNIFFLARE-S1, EUALKYFLARE-S1, EUCPFLARE-S1
FGFLARES	EG-CRUDEFLARE, EG-UNIFFLARE, EG-ALKYFLARE, EG-CPFLARE, EG-COKERFLARE	

FGFLARES-S1
FLEXIBLE GROUP CONDITIONS

DESCRIPTION: Refinery Flares. Four flares are subject to NSR Consent Decree and subsequent revisions.

Emission Unit: EUCRUDEFLARE-S1, EUUNIFFLARE-S1, EUALKYFLARE-S1, EUCPFLARE-S1

POLLUTION CONTROL EQUIPMENT : NA

I. EMISSION LIMIT(S)

1. NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. H_2S	0.10 grain per dry standard cubic foot(230 milligrams per dry standard cubic meter or 162 ppmdv)[2*]	Based upon a three hour average	FGFLARES-S1	V1, VI1	**40 CFR 60.104(a)(1) R 336.1406(1) R 336.1213**

Note: 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 malfunction is exempt from this requirement

* 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 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 Special Condition III.4. The Permittee may rely on prior investigation reports for events that have the same or similar root causes. [2] **(R 336.1213(3), R 336.1910, U.S. EPA Consent Order 01-40119)**

2. 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 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 336.1213(3), R 336.1910, U.S. EPA 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.

3. The permittee shall review and revise the Sulfur Shedding Plan on at least an annual basis to ensure it remains accurate. [2] **(R 336.1213(3), R 336.1910, U.S. EPA Consent Order 01-40119)**

4. 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 336.1213(3), R 336.1910, U.S. EPA 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 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.

5. The permittee shall complete each event-specific investigation report within 45 calendar days after the reportable flaring incident. [2] **(R 336.1213(3), R 336.1910, U.S. EPA Consent Order 01-40119)**

6. 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.[4]

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall maintain the ignition sensor and/or pilot flame for FGFLARES-S1. (**40 CFR 60 Subpart A)**

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 determine compliance with the hydrogen sulfide standard in 40 CFR 60.104(a)(1) as follows: Method 11 shall be used to determine the H2S concentration. **(40 CFR 60.106(e))**

See Appendix 5-S1 of MI-ROP-A9831

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 60, subpart J and where applicable Ja, in a manner and with instrumentation acceptable to the Division. [2] **(R 336.1201(3), 40CFR 60.105(a)(4))**

2. 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 H2S in the fuel gas being burned. **(40 CFR 60.105(a)(4)(ii))**

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. [2] **(R 336.1201(3), 40 CFR 60.7)**

See Appendix 8-S1 of MI-ROP-A9831

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. NA	NA	NA	**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. **(40 CFR Part 63 Subparts A & 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. **(40 CFR Part 60 Subparts A & 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).
[4]This condition is included at the request of the permittee.

FGFLARES

FLEXIBLE GROUP CONDITIONS

DESCRIPTION

All refinery flares. Four flares are subject to the NSR Consent Decree and subsequent revisions: EG-CRUDEFLARE, EG-UNIFFLARE, EG-ALKYFLARE, and EG-CPFLARE

Emission Units: EG-CRUDEFLARE, EG-UNIFFLARE, EG-ALKYFLARE, EG-CPFLARE, EG-COKERFLARE

POLLUTION CONTROL EQUIPMENT

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NA					

2. There shall be no visible emissions from any flare in FGFLARES 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]	160 ppmv on a 3 hour rolling average basis [2]	According to method	Each flare in FGFLARES	SC VI.1	40 CFR 60.104(a)(1)

[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.1 through 14.

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 J, as they apply to FGFLARES. [2] **(R 336.1702, 40 CFR Part 60 Subparts A & J)**

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 FGFLARES. [2] **(R 336.1702, 40 CFR Part 63 Subparts A and CC)**

3. The permittee shall conduct an event-specific investigation into each flaring incident that results in sulfur dioxide emissions greater than 500 pounds from FGFLARES in any 24-hour period. The investigation shall be performed in accordance with the requirements outlined in Special Condition III.11. 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, U.S. EPA Consent Order 01-40119)**

4. 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 in any 24-hour period. The investigation shall be performed in accordance with the requirements outlined in Special Condition III.12. The Permittee may rely on prior investigation reports for events that have the same or similar root causes. [4] **(R 336.1201(3))**

5. The permittee shall maintain FGFLARES 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 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), U.S. EPA 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.

6. 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)**

7. 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 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.11. 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)**

8. 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 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.[4] **(R 336.1201(3))**

9. The permittee shall prepare and follow a Flare Minimization Plan for FGFLARES. 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.

c. Procedures for conducting event-specific investigations as required by Conditions III.3 and III.7.

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.

10. The permittee shall review and revise the Flare Minimization Plan on at least an annual basis to that ensure it remains current and complies with the provisions outlined in Special Condition III.9. [2] **(R 336.1205, R 336.2802, 40 CFR 52.21)**

11. 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, U.S. EPA 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 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.

12. 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). [4] **(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 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.

13. 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, U.S. EPA Consent Order 01-40119)**

14. The permittee shall operate each flare in FGFLARES 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)**

15. 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.[4]

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each flare in FGFLARES with a pilot flame. [2] **(R 336.1910, 40 CFR Part 60 Subpart A, 40 CFR 63.11(b)(5))**

2. Each flare in FGFLARES 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))**

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 the heavy oil upgrade project, the permittee shall verify by testing, at the owner's expense, that each flare in FGFLARES is operating within the specified velocity and heat content limits specified within 40 CFR 60.18. No less than 60 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 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 336.1910, 40 CFR 60.18)**

See Appendix 1.5 of RO permit 199700013c

VI. MONITORING/RECORDKEEPING

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

1. Permittee shall monitor and keep records of the concentration of hydrogen sulfide in the refinery fuel gas burned in each flare in accordance with the Federal Standards of Performance as specified in 40 CFR 60, Subpart J, 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))**

2. The permittee shall keep records of emissions and operating information for each flare in FGFLARES 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 & J)**

3. The permittee shall monitor emissions and operating and maintenance information for each flare in FGFLARES 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 & CC)**

4. The permittee shall keep records of emission information and operating and maintenance information for each flare in FGFLARES 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 & 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. 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, U.S. EPA 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 Minimization Plan for FGFLARES, as required by SC III.6 and 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, U.S. EPA 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 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 B, 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)**

9. 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 B, 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.[4] **(R 336.1201(3))**

10. 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. **(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.

11. The permittee shall install, maintain, and continuously operate devices to continuously monitor and record the flow of steam to each flare in FGFLARES, 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: ± 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.

12. 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)**

13. 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)**

14. 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 on a continuous basis. **(R 336.1205, R 335.1224, R 336.1702, R 336.2802, 40 CFR 52.21)**

15. 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 on a continuous basis.[4] **(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.

See Appendices 1.3 and 1.4 of RO Permit 199700013c

VII. REPORTING

1. The permittee shall provide written notification of construction and operation of EG-COKERFLARE to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. [2] **(40 CFR 60.7)**

2. The permittee shall submit a copy of the Sulfur Shedding and Flare 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, U.S. EPA Consent Order 01-40119)**

3. The permittee shall submit to the AQD District Supervisor an operations and maintenance (O&M) plan and a Flare Minimization Plan for each flare in FGFLARES at least 120 days before commencing operation of EG70-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 & CC)**

4. The permittee shall submit the data on the concentration of hydrogen sulfide in the refinery fuel gas burned in the flares to the AQD District Supervisor in an acceptable format within 30 days following the end of the quarter in which the records were collected. [2] **(40 CFR 60.105(a)(4))**

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, U.S. EPA Consent Order 01-40119)**

6. The permittee shall submit the information required by SC VI.8 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). **(R 336.2818, 40 CFR 52.21(r)(6)(v))**

7. The permittee shall submit the information required by SC VI.8 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).[4] **(R 336.1201(3))**

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. NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. 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).
[4]This condition is included at the request of the permittee.

B-S1. SOURCE-WIDE CONDITIONS

POLLUTION CONTROL EQUIPMENT:

1. NA

I. EMISSION LIMIT(S)

1. NA

II. MATERIAL LIMIT(S)

1. NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. NA

V. TESTING/SAMPLING

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

1. NA

See Appendix 5-S1 of MI-ROP-A9831

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 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 Part 63.6(e)(1)(i)m 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."[4] **(R 336.1910, 40 CFR 63 Subpart A, 40 CFR Part 63.6(e)(1)(i))**

VII. REPORTING

1. NA

See Appendix 8-S1 of MI-ROP-A9831

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 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. **(R 336.1213(3))**

2. 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))**

3. 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 28 and 29 in Part A of the RO Permit. **(R 336.1213(4)(c))**

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

5. 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 63, Subpart A)**

6. 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 63, Subpart CC)**

7. 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 61, Subpart A)**

8. 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 61, Subpart M)**

9. 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. **(Paragraph 18 and 19 of Consent Decree No. 01-40119), (40 CFR 61, Subpart FF), (Consent Decree No. 01-40119)**

10. 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)**

11. 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, b & c))**

12. 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))**

13. . Except as provided for in condition 14, permittee shall notify the Division not less than 30 days before any process unit turnaround subject to the provisions of R336.1616. **(R 336.1616(3))**

14. 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 shutdown and deinventoried for major maintenance activities".

15. 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 63, Subpart UUU)**

16. When the odor of hydrogen sulfide is found to exist beyond the property line of the facility, 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)**

17. 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 63, Subpart ZZZZ)**

18. Permitee 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.[3] **(40 CFR 63, Subpart DDDD)**

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]40 CFR Part 63 Subpart DDDDD was vacated on July 30, 2007. All references to 40 CFR Part 63 Subpart DDDDD refer to the regulation prior to it being vacated until such time that a new rule is published in the federal register. Marathon will voluntarily follow the requirements of this regulation.

[4]This condition is included at the request of the permittee.