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April 11, 2014

Dana Leach
Calumet Montana Refining, LLC
1900 10th Street NE
Great Falls, MT 59404

RE: Final Title V Operating Permit #OP2161-09

Sent via email: dleach@calumetspecialty.com

Dear Mr. Leach:

The Montana Department of Environmental Quality has prepared the enclosed Final Operating Permit #OP2161-09, for Calumet Montana Refining, LLC (Calumet), located in NE¹/₄, Section 1, Township 20 North, Range 3 East, Cascade County, Montana. Please review the cover page of the attached permit for information pertaining to the action taking place on Permit #OP2161-09.

If you have any questions, please contact Ed Warner, the lead permit engineer, at (406) 444-2467 or by email at ewarner@mt.gov.

Sincerely,

Julie Merkel
Air Permitting Supervisor
Air Resources Management Bureau
(406) 444-3626

Ed Warner
Lead Engineer – Air Permitting Section
Air Resources Management Bureau
(406) 444-2467

JM:JO:BG:EW

Enclosure

cc: Robert Duraski, US EPA Region VIII 8P-AR
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STATE OF MONTANA
Department of Environmental Quality
Helena, Montana 59620



AIR QUALITY OPERATING PERMIT OP2161-09

Issued to: Calumet Montana Refining, LLC
1900 10th Street Northeast
Great Falls, MT 59404

Final Date: April 11, 2014
Expiration Date: January 10, 2019
Renewal Application Due: July 10, 2018

Effective Date: April 11, 2014
Date of Decision: March 11, 2014
End of EPA 45-day Review: March 10, 2014
Proposed Issue Date: January 23, 2014
Draft Issue Date: December 19, 2013

Application Deemed Technically Complete: August 16, 2013
Application Deemed Administratively Complete: August 16, 2013
Significant Modification Application Received: July 30, 2013
AFS Number: 030-013-004A

Permit Issuance and Appeal Processes: In accordance with Montana Code Annotated (MCA) Sections 75-2-217 and 218 and the Administrative Rules of Montana (ARM), ARM Title 17, Chapter 8, Subchapter 12, Operating Permit Program, this operating permit is hereby issued by the Department of Environmental Quality (Department) as effective and final on April 11, 2014. This permit must be kept on-site at the above named facility.

Montana Air Quality Operating Permit
Department of Environmental Quality

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Terms not otherwise defined in this permit, or in the Definitions and Abbreviations Appendix of this permit, have the meaning assigned to them in the referenced regulations.

SECTION I GENERAL INFORMATION

The following general information is provided pursuant to ARM 17.8.1210(1).

Company Name: Calumet Montana Refining, LLC (Calumet)

Mailing Address: 1900 10th Street Northeast

City: Great Falls

State: MT

Zip: 59404

Plant Location: NE¼, Section 1, Township 20 North, Range 3 East, Cascade County

Responsible Official: Dana Leach

Phone: 406-761-4100

Email: dleach@calumetspecialty.com

Facility Contact Person: Ray Martinich

Phone: 406-454-9862

Email: rmartinich@calumetspecialty.com

Alternate Facility Contact Person: Mike Raile

Phone: 406-454-9862

Email: mraile@calumetspecialty.com

Primary SIC Code: 2911

Nature of Business: Refining Hydrocarbons

Description of Process: Calumet operates a petroleum refinery in Great Falls, Montana. The general nature of business is to refine petroleum hydrocarbons into sellable products.

The refining process distills crude oil using heat. This distillation separates the crude oil into its component parts. The refiner then cracks some of the heavier molecules by applying heat in the presence of a catalyst to make the reaction take place. These raw products are then treated in several ways to take out impurities. Finally, the proper liquids and additives are blended to create the desired products. The major processing equipment includes:

- Crude Distillation
- Fluidized Catalytic Cracking Unit (FCCU)
- Catalytic Reformer Unit
- Catalytic Poly Unit
- Alkylation Unit
- Hydrogen Plants #1 and #2
- Polymer-Modified Asphalt (PMA) Unit
- Sodium Hydrosulfide (NaHS) Unit
- Diesel/Gas Hydrotreater (HTU) Unit
- Transfer Facilities (Gasoline Truck Loading Rack, Gasoline Railcar Loading Rack)
- Boilers #1, #2 and #3

SECTION II SUMMARY OF EMISSION UNITS

The emission units regulated by this permit are the following (ARM 17.8.1211):

Emission Unit ID	Description	Pollution Control Device/Practice
EU01	PLANT WIDE EMISSIONS	None
EU02	CRUDE UNIT	
EU02a	Crude Furnace	None
EU02b	Vacuum Heater	None
EU02c	Standard Gas Valves	None
EU02d	Standard Light Valves	None
EU02e	Drains	None
EU03	CATALYTIC POLY UNIT	
EU03a	Cat Poly Unit Valves	None
EU04	FLUID CATALYTIC CRACKING UNIT	
EU04a	FCCU Regenerator	None
EU04b	FCCU Preheater	None
EU04c	Standard Gas Valves	None
EU04d	Standard Light Valves	None
EU04e	Pumps Light	None
EU005	CATALYTIC REFORMER UNIT	
EU05a	Reformer Heater	None
EU05c	Standard Gas Valves	None
EU05d	Standard Light Valves	None
EU05e	Kerosene Heater	None
EU05f	Naphtha HDS Unit	None
EU05g	Kerosene HDS Unit	None
EU06	STORAGE LOADOUT UNIT	
EU06a	Product Loadout Facilities	None
EU06b	Pumps	None
EU06c	Storage LPG	None
EU06d	Standard Light Valves	None
EU06e	Storage Tank Farm	Floating Roofs
EU06f	Tanks Light	None
EU06g	Crude Oil Tank	None
EU07	UTILITY UNIT	
EU07a	Wastewater Treatment Plant	None
EU07b	Boilers #1 & #2	None
EU07c	Standard Gas Valves	None
EU07d	Boiler #3	None
EU08	ALKYLATION UNIT	
EU08a	Deisobutanizer Reboiler	None
EU08b	Standard Light Valves	None
EU08c	Pumps Light	None
EU08d	Oily Water Separator	None
EU09	HYDROGEN PLANTS	
EU09a	Hydrogen Plant #1 Reformer Furnace Stack (natural gas)	None
EU09b	Hydrogen Plant #2 Reformer Furnace Stack (natural gas)	None

EU10	GASOLINE TRUCK LOADING RACK	
EU10a	Gasoline Truck Loading Rack	Vapor Combustion Unit (VCU)
EU10b	VCU	None
EU11	ASPHALT AND POLYMER-MODIFIED ASPHALT UNIT	None
EU12	COOLING TOWERS	None
EU13	SODIUM HYDROSULFIDE UNIT	None
EU14	DIESEL/GAS HYDROTREATER UNIT (natural gas)	None
EU15	GASOLINE RAILCAR LOADING RACK	
EU15a	Gasoline Railcar Loading Rack	VCU
EU15b	VCU	None

SECTION III PERMIT CONDITIONS

The following requirements and conditions are applicable to the facility or to specific emission units located at the facility (ARM 17.8.1211, 1212, and 1213).

A. Facility-Wide

Conditions	Rule Citation	Rule Description	Pollutant/Parameter	Limit
A.1	ARM 17.8.105	Testing Requirements	Testing Requirements	-----
A.2	ARM 17.8.106	Source Testing Protocol	Testing, Recordkeeping, and Reporting Requirements	-----
A.3	ARM 17.8.304(1)	Visible Air Contaminants	Opacity	40%
A.4	ARM 17.8.304(2)	Visible Air Contaminants	Opacity	20%
A.5	ARM 17.8.304(3)	Visible Air Contaminants	Opacity	60%
A.6	ARM 17.8.308(1)	Particulate Matter, Airborne	Fugitive Opacity	20%
A.7	ARM 17.8.308(2)	Particulate Matter, Airborne	Reasonable Precautions	-----
A.8	ARM 17.8.308(3)	Particulate Matter, Airborne	Reasonable Precaution, Construction	20%
A.9	ARM 17.8.309	Particulate Matter, Fuel Burning Equipment	Particulate Matter	$E = 0.882 * H^{-0.166}$ or $E = 1.026 * H^{-0.233}$
A.10	ARM 17.8.310	Particulate Matter, Industrial Processes	Particulate Matter	$E = 4.10 * P^{0.67}$ or $E = 55 * P^{0.11} - 40$
A.11	ARM 17.8.322(4)	Sulfur Oxide Emissions, Sulfur in Fuel	Sulfur in Fuel (liquid or solid fuels)	1 lb/MMBtu fired
A.12	ARM 17.8.322(5)	Sulfur Oxide Emissions, Sulfur in Fuel	Sulfur in Fuel (gaseous)	50 gr/100 CF
A.13	ARM 17.8.324(1)	Hydrocarbon Emissions, Petroleum Products	65,000 Gallon Capacity	-----
A.14	ARM 17.8.324(2)	Hydrocarbon Emissions, Petroleum Products	Oil-effluent Water Separator	-----
A.15	ARM 17.8.324(3)	Hydrocarbon Emissions, Petroleum Products	Gasoline Storage Tanks	-----
A.16	ARM 17.8.341, 40 CFR Part 61	National Emissions Standards for Benzene Waste Operations	Petroleum Refinery Wide – applicable provisions of 40 CFR 61, Subparts J, M, V & FF	-----
A.17	ARM 17.8.342, 40 CFR Part 63	NESHAPs General Provisions	SSM Plans	Submittal
A.18	ARM 17.8.1211(1)(c) and 40 CFR Part 98	Greenhouse Gas Reporting	Reporting	-----
A.19	ARM 17.8.1212	Reporting Requirements	Prompt Deviation Reporting	-----
A.20	ARM 17.8.615	Firefighting Training Permits	Firefighting Requirements	
A.21	40 CFR Part 68	Chemical Accident Prevention	Risk Management Plan	
A.22, A.24	CIV-01-1422LH (entered 3/5/02)	Consent Decree	Various	As specified
A.23	ARM 17.8.749	Reporting Requirements	Quarterly Emission Reports	-----
A.25	ARM 17.8.1212	Reporting Requirements	Compliance Monitoring	-----
A.26	ARM 17.8.1207	Reporting Requirements	Annual Certification	-----

Conditions

- A.1. Pursuant to ARM 17.8.105, any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct test, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

Compliance demonstration frequencies that list “as required by the Department” refer to ARM 17.8.105. In addition, for such sources, compliance with limits and conditions listing “as required by the Department” as the frequency, is verified annually using emission factors and engineering calculations by the Department’s compliance inspectors during the annual emission inventory review; in the case of Method 9 tests, compliance is monitored during the regular inspection by the compliance inspector.

- A.2. Pursuant to ARM 17.8.106, all emission source testing, sampling and data collection, recording analysis, and transmittal must be performed, maintained, and reported in accordance with the Montana Source Test Protocol and Procedures Manual (dated July 1994 unless superseded by rulemaking), unless alternate methods are approved by the Department.
- A.3. Pursuant to ARM 17.8.304(1), Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit. This rule does not apply to emissions from new stationary sources listed in ARM 17.8.340 for which a visible emission standard has been promulgated.
- A.4. Pursuant to ARM 17.8.304(2), Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit. This rule does not apply to emissions from new stationary sources listed in ARM 17.8.340 for which a visible emission standard has been promulgated.
- A.5. Pursuant to ARM 17.8.304(3), during the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes.
- A.6. Pursuant to ARM 17.8.308(1), Calumet shall not cause or authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control emissions of particulate matter (PM) are taken. Such emissions of airborne PM from any stationary source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.
- A.7. Pursuant to ARM 17.8.308(2), Calumet shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne PM, unless otherwise specified by rule or in this permit.
- A.8. Pursuant to ARM 17.8.308(3), Calumet shall not operate a construction site or demolition project unless reasonable precautions are taken to control emissions of airborne PM. Such emissions of airborne PM from any stationary source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes, unless otherwise specified by rule or in this permit.

- A.9. Pursuant to ARM 17.8.309, unless otherwise specified by rule or in this permit, Calumet shall not cause or authorize PM, caused by the combustion of fuel, to be discharged from any stack or chimney into the outdoor atmosphere in excess of the maximum allowable emissions of PM for existing fuel-burning equipment and new fuel-burning equipment calculated using the following equations:

For existing fuel-burning equipment (installed before November 23, 1968):

$$E = 0.882 * H^{-0.1664}$$

For new fuel-burning equipment (installed on or after November 23, 1968):

$$E = 1.026 * H^{-0.233}$$

Where H is the heat input capacity in million British thermal units (MMBtu) per hour and E is the maximum allowable particulate emissions rate in pounds per MMBtu.

- A.10. Pursuant to ARM 17.8.310, unless otherwise specified by rule or in this permit, Calumet shall not cause or authorize PM to be discharged from any operation, process, or activity into the outdoor atmosphere in excess of the maximum hourly allowable emissions of PM calculated using the following equations:

For process weight rates up to 30 tons per hour: $E = 4.10 * P^{0.67}$

For process weight rates in excess of 30 tons per hour: $E = 55.0 * P^{0.11} - 40$

Where E is the rate of emissions in pounds per hour and P is the process weight rate in tons per hour.

- A.11. Pursuant to ARM 17.8.322(4), Calumet shall not burn liquid or solid fuels containing sulfur in excess of 1 pound per MMBtu fired, unless otherwise specified by rule or in this permit. This rule shall be interpreted to mean that no person shall burn solid, liquid, or gaseous fuels such that the aggregate sulfur content of all fuels burned within a plant during any day exceeds 1 pound of sulfur per MMBtu fired. The rule shall be interpreted to allow for a daily deviation of 0.1 pound of sulfur per MMBtu fired. The rule shall be interpreted to allow the blending of all fuels burned in a plant during a given time period in determining the aggregate sulfur content for purposes of the rule, and it shall not be construed to require blending or physical mixing of fuels at any given furnace or heater within the plant complex (EPA-approved SIP, September 1979).
- A.12. Pursuant to ARM 17.8.322(5), Calumet shall not burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet (gr/100 CF) of gaseous fuel, calculated as hydrogen sulfide at standard conditions, unless otherwise specified by rule or in this permit. This rule shall be interpreted to mean that no person shall burn solid, liquid, or gaseous fuels such that the aggregate sulfur content of all fuels burned within a plant during any day exceeds 1 pound of sulfur per MMBtu fired. The rule shall be interpreted to allow for a daily deviation of 0.1 pound of sulfur per MMBtu fired. The rule shall be interpreted to allow the blending of all fuels burned in a plant during a given time period in determining the aggregate sulfur content for purposes of the rule, and it shall not be construed to require blending or physical mixing of fuels at any given furnace or heater within the plant complex (EPA-approved SIP, September 1979).
- A.13. Pursuant to ARM 17.8.324(1), unless otherwise specified by rule or in this permit, Calumet shall not place, store or hold in any stationary tank, reservoir or other container of more than 65,000-gallon capacity any crude oil, gasoline or petroleum distillate having a vapor pressure of 2.5 pounds per square inch absolute or greater under actual storage conditions, unless such tank, reservoir or other container is a pressure tank maintaining working pressure sufficient at all times to prevent hydrocarbon vapor or gas loss to the atmosphere, or is designed and equipped with a vapor loss control device, properly installed, in good working order and in operation.

- A.14. Pursuant to ARM 17.8.324(2), unless otherwise specified by rule or in this permit, Calumet shall not use any compartment of any single or multiple-compartment oil-effluent water separator which compartment receives effluent water containing 200 gallons a day or more of any petroleum product from any equipment processing, refining, treating, storing or handling kerosene or other petroleum product of equal or greater volatility than kerosene, unless such compartment is equipped with a vapor loss control device, constructed so as to prevent emission of hydrocarbon vapors to the atmosphere, properly installed, in good working order and in operation.
- A.15. Pursuant to ARM 17.8.324(3), Calumet shall not load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device or is a pressure tank as described in ARM 17.8.324(1), or unless otherwise specified by rule or in this permit.
- A.16. Pursuant to ARM 17.8.341 and 40 CFR Part 61, Calumet shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements, contained in the National Emission Standards for Hazardous Air Pollutants (NESHAPS) provisions of 40 CFR 61, Subpart J Equipment Leaks (Benzene), Subpart V Equipment Leaks, Subpart FF Benzene Waste Operations and Subpart M Asbestos. If at any time from the Date of Lodging of the Consent Decree Calumet is determined to have a total annual benzene (TAB) equal to or greater than 10 megagrams per year (Mg/yr), Calumet, as applicable, shall comply with the compliance option set forth at 40 CFR 61.342(e).
- A.17. Pursuant to ARM 17.8.342 and 40 CFR Part 63.6, Calumet shall submit to the Department a copy of any startup, shutdown, and malfunction (SSM) plan required under 40 CFR Part 63.6(e)(3) within 30 days of the effective date of this operating permit (if not previously submitted), within 30 days of the compliance date of any new NESHAPs or Maximum Achievable Control Technology (MACT) standard, and within 30 days of the revision of any such SSM plan, when applicable. The Department requests submittal of such plans in electronic form, when possible.
- A.18 Pursuant to ARM 17.8.1211(1)(c) and 40 CFR Part 98, Calumet shall comply with requirements of 40 CFR Part 98 – Mandatory Greenhouse Gas Reporting, as applicable (ARM 17.8.1211(1)(c), NOT an applicable requirement under Title V).
- A.19. Calumet shall promptly report deviations from permit requirements including those attributable to upset conditions, as upset is defined in the permit. To be considered prompt, deviations shall be reported to the Department using the schedule and content as described in Section V.E (unless otherwise specified in an applicable requirement) (ARM 17.8.1212).
- A.20 Pursuant to ARM 17.8.615, Calumet shall apply for and comply with a Firefighter Training permit to conduct open burning for fire training purposes.
- A.21. Calumet shall submit a certification statement to the Department that states Calumet is in compliance with the requirements of 40 CFR Part 68, including registration and updates of their Risk Management Plan (40 CFR 68.150, 68.160 and 68.190).
- A.22. Calumet shall comply with the following applicable terms of US EPA Consent Decree CIV-01-1422LH (entered March 5, 2002), and its Amendments, for the life of the Consent Decree (ARM 17.8.1211):

- a. Section V: Affirmative Relief/Environmental Projects
 - b. Section VI: Emission Credit Generation
 - c. Section VII: Modification to Implementation Schedules
 - d. Section IX: Reporting and Recordkeeping
 - e. Section XIII: Right of Entry
 - f. Section XIV: Force Majeure
 - g. Section XVII: General Provisions
- A.23. Quarterly, Calumet shall submit a consolidated emissions report and Quality Assurance/Quality Control (QA/QC) results, in one document, to the Department, for emission reporting required by specific emitting units. The report may be in hard and electronic form with the electronic format in ASCII and with a template of each set of data. The quarterly emission report shall be submitted to the Department with the compliance monitoring report within 45 days following the end of the calendar quarter.
- A.24. Calumet shall comply with all reporting requirements related to the applicable terms (as identified in Section II.A.20) contained in the USEPA Consent Decree CIV-01-1422LH, for the life of the Consent Decree (ARM 17.8.1211).
- A.25. On or before February 15 and August 15 of each year, Calumet shall submit to the Department the compliance monitoring reports required by Section V.D, as described under ARM 17.8.1212. These reports must contain all information required by Section V.D, as well as the information required by each individual emissions unit. For the reports due by February 15 of each year, Calumet may submit a single report, provided that it contains all the information required by Section V.B & V.D. Per ARM 17.8.1207,

any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12 (including semiannual monitoring reports), shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that, “based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.”

- A.26. By February 15 of each year, Calumet shall submit to the Department the compliance certification report required by Section V.B. The annual certification report required by Section V.B must include a statement of compliance based on the information available, which identifies any observed, documented or otherwise known instance of noncompliance for each applicable requirement. Per ARM 17.8.1207,

any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12 (including annual certifications), shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that, “based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.”

B. EU01 – PLANT WIDE LIMITATIONS

EU01 – Plant-Wide Refinery

Condition(s)	Pollutant/ Parameter	Permit Limit		Compliance Demonstration		Reporting Requirements
				Method	Frequency	
B.1, B.12, B.23, B.31, B.34, B.35	Fuel Gas	40 CFR 60, Subpart J		40 CFR 60, Subpart J	40 CFR 60, Subpart J	Semiannual
B.2, B.13, B.24, B.31, B.34, B.35	Fuel Gas	40 CFR 60, Subpart Ja		40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	Semiannual
B.3, B.4, B.12, B.13, B.14, B.22, B.25, B.31 to B.35	Hydrogen Sulfide (H ₂ S) in Refinery Fuel Gas (RFG)	H ₂ S limit for Fuel combustion device pre-May 14, 2007	H ₂ S limit for Fuel combustion device post-May 14, 2007	H ₂ S Continuous Emission Monitoring System (CEMS)	Ongoing	Quarterly
				Cylinder Gas Audit	Quarterly	
				Relative Accuracy Test Audit (RATA) / Method 11	Annually	Semiannual
B.5, B.15, B.25, B.31 to B.35	Sulfur Dioxide (SO ₂)	1,515 tons per year (TPY), and 4.15 tons per rolling 24-hours		RFG usage	Ongoing	Quarterly
				RFG - H ₂ S monitor	Ongoing	
				Sour Water Stripper Overhead (SWSOH) H ₂ S concentration & combustion amount, OR SO ₂ monitoring from Boilers #1 & #2 stack	Ongoing (see Section III.H.)	
				FCCU CEMS (converted to daily mass emissions)	Ongoing (see Section III.E.)	
				#1 and #2 Boiler CEMS (converted to daily mass emissions)	Ongoing (see Section III.H)	
				FCCU testing	Annual (see Section III.E.)	
B.6, B.17, B.22, B.26, B.30, B.31, B.32, B.34, B.35	Carbon Monoxide (CO)	4,700 TPY & 12.9 tons per rolling 24-hours		Method 10 on major facility units	As required by the Department and Section III.A.1	Semiannual

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
			FCCU testing	Annual (see Section III.E.)	
B.7, B.8, B.18, B.27, B.31, B.34, B.35	Refinery flare	Emergency use only	Notification	> Minor flaring event occurs	Quarterly
B.9, B.19, B.28, B.31, B.34, B.35	Fuel oil consumption	Prohibited from firing fuel oil	Summary log	Ongoing	Semiannual
B.10, B.20, B.29, B.31, B.34, B.35	VOC, HAP, and Benzene Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	
B.11, B.21, B.30, B.31, B.34, B.35	Ambient Air Monitoring Plan	In accordance w/ Appendix E	In accordance w/ Appendix E	In accordance w/ Appendix E	Quarterly

Conditions

- B.1. Calumet shall comply with all applicable requirements of 40 CFR 60, Subpart J – Standards of Performance for Petroleum Refineries, as it applies to fuel gas combustion devices. These regulations shall apply to Calumet’s heaters and boilers, emergency flare (D-720), and any other equipment, as appropriate (Consent Decree Paragraphs 17 and 19, ARM 17.8.340 and 40 CFR 60, Subpart J).
- B.2. Calumet shall comply with all applicable requirements of 40 CFR 60, Subpart Ja – Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced after May 14, 2007. These regulations apply to Boiler #3, naphtha charge heater, and the naphtha splitter reboiler heater, as applicable (ARM 17.8.340 and 40 CFR 60, Subpart Ja).
- B.3. For fuel gas and fuel oil combustion devices where construction, reconstruction, or modification commenced prior to May 14, 2007, Calumet shall not combust fuel gas with a H₂S concentration in excess of 230 mg/dscm (equivalent to 162 parts per million by volume (ppmv) basis and 0.10 grains per dry standard cubic foot (gr/dscf)) determined on a 3-hour rolling average (Consent Decree Paragraph 17, ARM 17.8.340 and 40 CFR 60, Subpart J).
- B.4. For fuel combustion devices where construction, reconstruction, or modification commenced after May 14, 2007, Calumet shall not combust fuel gas with a H₂S concentration in excess of 162 ppmv determined on a 3-hour rolling average basis and H₂S concentration in excess of 60 ppmv determined daily on 365-successive calendar day rolling average basis (Consent Decree Paragraph 17, ARM 17.8.340 and 40 CFR 60, Subpart Ja).
- B.5. Calumet shall be limited to maximum SO₂ emissions of 1,515 TPY and 4.15 tons/rolling 24-hours (ARM 17.8.749).
- B.6. Calumet shall be limited to maximum CO emissions of 4,700 TPY and 12.9 tons/rolling 24-hours (ARM 17.8.749).
- B.7. The refinery flare shall be utilized for emergency use only (ARM 17.8.749 and ARM 17.8.752).

- B.8. Calumet shall notify the Department if a flaring event is greater than a minor flaring event. A minor flaring event is a flaring event that emits less than or equal to 300 lb/3-hr of SO₂ (ARM 17.8.1212 & ARM 17.8.1213).
- B.9. Calumet shall not combust fuel oil in any combustion unit, except torch oil may be used in the FCCU Regenerator during FCCU startups (Consent Decree Paragraph 17 and ARM 17.8.749).
- B.10. Calumet shall comply with all the applicable requirements in 40 CFR 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, including compliance with specific requirements in 40 CFR 60, Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified in each applicable emitting unit. In addition, Calumet shall comply with this regulation for: heat exchange systems, light straight run naphtha treater, caustic regenerator, and isomerization unit (ARM 17.8.749, ARM 17.8.342 and 40 CFR 63, Subpart CC).
- B.11. Calumet shall conduct ambient air monitoring as described in Appendix E of this permit (ARM 17.8.749).

Compliance Demonstration

- B.12. Calumet shall conduct all monitoring and testing as required by 40 CFR 60, Subpart J – Standards of Performance for Petroleum Refineries (ARM 17.8.340 and 40 CFR 60, Subpart J).
- B.13. Calumet shall conduct all monitoring and testing as required by 40 CFR 60, Subpart Ja – Standards of Performance for Petroleum Refineries Standards for Which Construction, Reconstruction, or Modification Commenced after May 14, 2007 (ARM 17.8.340 and 40 CFR 60, Subpart J).
- B.14. In order to monitor compliance with the limits in Section III.B.3 and III.B.4, Calumet shall install, calibrate, maintain, and operate an instrument for continuously monitoring and recording the concentration (dry basis) of H₂S in the RFG in accordance with the requirements of 40 CFR 60.11, 60.13, and Part 60 Appendix A, and the applicable performance specification test of 40 CFR Part 60 Appendix B and quality assurance/quality control procedures of 40 CFR Part 60 Appendix F (Consent Decree paragraph 17; ARM 17.8.340 and 40 CFR 60, Subpart J). In addition, Calumet shall operate continuous RFG usage meters for the vacuum heater, the crude heater, the boilers, and all other heaters and boilers that combust RFG (ARM 17.8.749).
- B.15. Compliance with the plant-wide SO₂ emission limitations contained in Section III.B.5 shall be monitored using data taken from the RFG H₂S monitoring systems required by 40 CFR 60, Subpart J, in conjunction with metered RFG usage (including SWSOH, if appropriate), data from the FCCU and #1 and #2 Boilers SO₂ CEMS, and stack testing data (Consent Decree paragraph 17; ARM 17.8.340; 40 CFR 60, Subpart J; MRC (Montana Refining Company) May 2008 Administrative Order on Consent; and ARM 17.8.749).
- B.16. As required by the Department and Section III.A.1, Calumet shall perform a Method 10 test on each major CO emitting unit, as determined by the Department, in accordance with the test methods being used and Section III.A.2 (ARM 17.8.105).
- B.17. Compliance with the plant-wide CO emission limitations contained in Section III.B.6 shall be monitored based on data from the FCCU CO CEMS and emission factors developed from stack tests of the #1 & #2 boiler, FCCU, product loading VCU, and any other stack tests conducted (ARM 17.8.749 and ARM 17.8.1213).

- B.18. For the purposes of determining whether a flaring event greater than 300 lb/3-hour period has occurred, Calumet shall maintain records of activities, other than de minimis activities, that result in SO₂ emissions from the flare. De minimis activities include, but are not limited to, the sweet gas streams, natural gas streams, propane, butane, and Liquefied Petroleum Gas (LPG) streams, and hydrogen streams (ARM 17.8.1213).
- B.19. Compliance with Section III.B.9 shall be accomplished by not firing fuel oil in any heater or boiler, except torch oil may be used in the FCCU Regenerator during FCCU startups (ARM 17.8.1213).
- B.20. Compliance with the equipment leak standards as required by Section III.B.10 shall be performed in accordance with 40 CFR 63.648, including instituting a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV. Compliance with this requirement is considered to monitor compliance with 40 CFR 60, Subpart GGG and 40 CFR 61, Subparts J and V (ARM 17.8.340 and 40 CFR 60, Subpart VV, ARM 17.8.342 and 40 CFR 63, Subpart CC).
- B.21. Compliance with the ambient air monitoring requirements shall be as required by Appendix E of this permit (ARM 17.8.1213).

Recordkeeping

- B.22. All source test recordkeeping shall be performed in accordance with the test methods being used and Section III.A.2 (ARM 17.8.106).
- B.23. Calumet shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60, Subpart J (Consent Decree Paragraph 17, ARM 17.8.340 and 40 CFR Part 60).
- B.24. Calumet shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60, Subpart Ja (ARM 17.8.340 and 40 CFR 60, Subpart Ja).
- B.25. Calumet shall maintain a file of all refinery fuel gas usage and H₂S measurements, and SO₂ emissions, including CEMS, monitoring device, and performance testing measurements; all CEMS performance evaluations; all CEMS or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60 (Consent Decree Paragraph 17, ARM 17.8.340 and 40 CFR Part 60).
- B.26. Calumet shall maintain records of the CO emissions as required by Section III.B.17 (ARM 17.8.749 and ARM 17.8.1213).
- B.27. Calumet shall maintain the flaring records on site, as specified in Section III.B.18, notify the Department of events greater than minor flaring events, and submit the records to the Department upon request. The records shall include the following for each flaring event (ARM 17.8.1212):
 - a. The time of the event;
 - b. The duration of the event;
 - c. The amount of material (flow rate or volume, and estimated equivalent sulfur content) flared during the event; and
 - d. The cause for the event.
- B.28. Calumet shall maintain records that fuel oil was not fired as described in Section III.B.19 (ARM 17.8.1213).

- B.29. Calumet shall comply with the recordkeeping requirements for equipment leak standards in accordance with 40 CFR 63.655 and 40 CFR 61.356, as applicable (ARM 17.8.342 and 40 CFR 63, Subpart CC; ARM 17.8.341 and 40 CFR 61, Subparts J and V).
- B.30. Calumet shall keep records in accordance with the requirements of Appendix E of this permit and 40 CFR 60, Appendix F (ARM 17.8.1212).
- B.31. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

- B.32. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
- B.33. Calumet shall provide quarterly reports, as required by Section III.A.23, using the data collected as required above, that will monitor compliance with the plant-wide emission limits. The quarterly reports shall include the following (ARM 17.8.1212):
- a. Facility-wide SO₂ emission estimates for each month of the quarter, including:
 - Refinery fuel gas: daily H₂S monitoring data and refinery fuel gas usage;
 - Caustic scrubbed SWSOH: daily H₂S and SWSOH combustion amount, or SO₂ monitoring data from the #1, #2, and #3 boiler stacks, as required by Section III.H;
 - SO₂ CEMS Data from FCCU, as required by Section III.E, and the #1, #2, and #3 Boilers, as required by Section III.H, converted to daily mass emissions;
 - b. Compliance source test data used to update emission factors, conducted during the reporting period;
 - c. Identification of any periods of excess emissions or other excursions during the reporting period;
 - d. Monitoring downtime that occurred during the reporting period;
 - e. A summary of the records required for the flaring events that are required by Section III.B.27; and
 - f. A summary of the quarterly Cylinder Gas Audit (CGA) and any daily calibration drift findings.
- B.34. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- B.35. The semiannual report shall provide (ARM 17.8.1212):
- a. A summary of results of any source testing that was performed during the reporting period;

- b. Summary of compliance with applicable requirements for 40 CFR 60, Subpart J (refinery fuel gas combustion and flare);
- c. Summary of the records required by Section III.B.26;
- d. Summary of the records that were maintained to document that fuel oil was not combusted, as required by Section III.B.28;
- e. Summary of compliance with emission limits and that quarterly reports were submitted as required by Section III.B.33;
- f. Summary of the reports required to demonstrate compliance with 40 CFR 63, Subpart CC;
- g. Summary of the reports required for 40 CFR 60, Subpart J;
- h. Summary of the reports required for 40 CFR 60, Subpart Ja;
- i. Summary of the records of ambient air monitoring that were maintained in accordance with Section III.B.30.

C. EU02 – CRUDE UNIT

EU02a – Crude Furnace
EU02c – Standard Gas Valves
EU02e – Drains

EU02b – Vacuum Heater
EU02d – Standard Light Valves

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
C.1, C.8, C.13, C.17 to C.20	Opacity – Vacuum heater	40%/ 60%	Method 9/ Weekly Visual Survey	As required by the Department and Section III.A.1	Semiannual
C.2, C.8, C.13, C.17 to C.20	Opacity – Crude Furnace, valves and drains	20%/ 60%			
C.3, C.9, C.14, C.17, C.19, C.20	Crude Stack Height	150 ft	Log	Semiannual	
C.4, C.10, C.15, C.17, C.19, C.20	Old Sour Water Stripper (SWS)	Not reactivate without prior Department approval	Log	Semiannual	
C.5, C.7, C.11, C.16, C.19, C.20	VOC, HAP, and Benzene Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	Semiannual
C.6, C.7, C.12, C.16, C.19, C.20	Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 63.648	40 CFR 63.655	Semiannual

Conditions

- C.1. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the vacuum heater, that exhibits an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- C.2. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the crude furnace, valves, and drains, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- C.3. The crude stack height shall be at least 150-feet above ground level (ARM 17.8.749).
- C.4. Calumet shall not re-activate the old SWS unit that was taken out of stripping service in 2006, without conducting a permitting analysis in conformance with ARM 17.8 Subchapter 7, and obtaining Department approval, in writing (ARM 17.8.749).

- C.5. Calumet shall comply with all the applicable requirements in 40 CFR 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, including compliance with specific requirements in 40 CFR 60, Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified in each applicable emitting unit (ARM 17.8.749, ARM 17.8.342 and 40 CFR 63, Subpart CC).
- C.6. Calumet shall comply with the applicable requirements of 40 CFR Part 63.648 for equipment leaks (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- C.7. Calumet shall comply with the applicable requirements of 40 CFR Part 63.643 for miscellaneous process vents (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Compliance Demonstration

- C.8. Calumet shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on each applicable source. Under the visual survey option, once per calendar week, during daylight hours, Calumet shall visually survey for any visible emissions. If visible emissions are observed during the visual survey, Calumet must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 15% opacity (for units subject to the 20% opacity limit), or 35% opacity (for units subject to the 40% opacity limit) based on the Method 9 source test, Calumet shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Calumet shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Calumet of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then Calumet shall perform the Method 9 source tests on the unit for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater (or 40% for applicable units), then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

- C.9. Compliance with Section III.C.3 shall be accomplished by maintaining the crude stack at least 150-feet above ground level (ARM 17.8.1213).
- C.10. Compliance with Section III.C.4 shall be accomplished by not re-activating the old SWS without Department approval (ARM 17.8.1213).
- C.11. Compliance with the equipment leak standards shall be monitored in accordance with 40 CFR 63.648, including instituting a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV (ARM 17.8.340 and 40 CFR 60, Subpart VV, ARM 17.8.342 and 40 CFR 63, Subpart CC).

- C.12. Calumet shall monitor compliance with the miscellaneous process vents requirements by complying with 40 CFR 63.644 and 63.645 (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Recordkeeping

- C.13. If visual surveys are performed, Calumet shall maintain a log to verify that the visual surveys were performed as specified in Section III.C.8. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.106 and ARM 17.8.1212).
- C.14. Calumet shall maintain a log of the crude stack height, noting if any changes occur, to document compliance with Section III.C.9 (ARM 17.8.1213).
- C.15. Calumet shall maintain a log regarding the old SWS, noting if activation occurs, to document compliance with Section III.C.10 (ARM 17.8.1213).
- C.16. Calumet shall comply with the recordkeeping requirements for equipment leaks and miscellaneous process vents in accordance with 40 CFR 63, Subpart CC or applicable recordkeeping requirements of 40 CFR 60, Subpart VV (ARM 17.8.340 and 40 CFR 60, Subpart VV, and ARM 17.8.342 and 40 CFR 63, Subpart CC).
- C.17. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

- C.18. Any compliance source test reports and/or logs must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
- C.19. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.
- C.20. The semiannual report shall provide (ARM 17.8.1212):
- a. A summary of the results of any testing that was performed on the crude unit during the reporting period;
 - b. Summary log that records were maintained as required by Section III.C.14 to document that the crude stack height has been maintained at least 150 feet above ground level;
 - c. Summary log that records were maintained as required by Section III.C.15; and
 - d. Summary documenting that compliance with 40 CFR 63, Subpart CC was maintained.

D. EU03 – CATALYTIC POLY UNIT

EU03a - Cat Poly Unit Valves

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
D.1, D.4, D.7, D.10 to D.13	Opacity	20%	Method 9/ Weekly Visual Survey	As required by the Department and Section III.A.1	Semiannual
D.2, D.5, D.6, D.8, D.10, D.11-D.13	VOC, HAP, and Benzene Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	Semiannual
D.3, D.6, D.9, D.10, D.11 to D.13	Equipment Leaks	40 CFR 63, Subpart CC	40 CFR Part 63.648	40 CFR Part 63.655	40 CFR Part 63.655 and Semiannual

Conditions

- D.1. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- D.2. Calumet shall comply with all the applicable requirements in 40 CFR 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, including compliance with specific requirements in 40 CFR 60, Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified in each applicable emitting unit (ARM 17.8.749, ARM 17.8.342 and 40 CFR 63, Subpart CC).
- D.3. Calumet shall comply with the applicable requirements of 40 CFR 63.648 for equipment leaks (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Compliance Demonstration

- D.4. Calumet shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on the Cat Poly Unit Valves. Under the visual survey option, once per calendar week, during daylight hours, Calumet shall visually survey for any visible emissions. If visible emissions are observed during the visual survey, Calumet must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 15% opacity based on the Method 9 source test, Calumet shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Calumet shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Calumet of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then Calumet shall perform the Method 9 source tests on the unit for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater, then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

- D.5. Calumet shall comply with all the applicable requirements in 40 CFR 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, including compliance with specific requirements in 40 CFR 60, Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified in each applicable emitting unit (ARM 17.8.749, ARM 17.8.342 and 40 CFR 63, Subpart CC).
- D.6. Compliance with the equipment leak standards shall be monitored in accordance with 40 CFR 63.648, including instituting a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV (ARM 17.8.340 and 40 CFR 60, Subpart VV, ARM 17.8.342 and 40 CFR 63, Subpart CC).

Recordkeeping

- D.7. If visual surveys are performed, Calumet shall maintain a log to verify that the visual surveys were performed as specified in Section III.D.4. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.1212).
- D.8. Calumet shall comply with all the applicable recordkeeping requirements in 40 CFR 63, Subpart CC with specific requirements in 40 CFR 60, Subpart VV (ARM 17.8.340, ARM 17.8.342, 40 CFR 63, Subpart CC and 40 CFR 60, Subpart VV).
- D.9. Calumet shall comply with the recordkeeping requirements for equipment leaks in accordance with 40 CFR 63.655 (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- D.10. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

- D.11. Any compliance source test reports and/or logs must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
- D.12. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.
- D.13. The semiannual report shall provide (ARM 17.8.1212):
 - a. A summary of results of any source testing that was performed on the Catalytic Poly Unit during the reporting period, and
 - b. Summary that compliance with 40 CFR 63, Subpart CC and/or 40 CFR 60, Subpart VV was maintained (ARM 17.8.1212).

E. EU04 – FLUID CATALYTIC CRACKING UNIT (FCCU)

**EU04a – FCCU Regenerator
EU04c – Standard Gas Valves
EU04e – Pumps Light**

**EU04b – FCCU Preheater
EU04d – Standard Light Valves**

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
E.1, E.11, E.12, E.20, E.26, E.27, E.28, E.29, E.30	Opacity – FCCU Regenerator	40%	Method 9/ Weekly Visual Survey	As required by the Department and Section III.A.1	Semiannual
			Continuous Opacity Monitoring System (COMS)	Ongoing	
E.2, E.11, E.20, E.26, E.27, E.29, E.30	Opacity – FCCU Preheater	20%	Method 9/ Weekly Visual Survey	As required by the Department and Section III.A.1	Semiannual
E.3, E.13, E.21, E.27, E.29, E.30	FCCU Regenerator – CO and SO ₂	40 CFR 60, Subpart J	40 CFR 60, Subpart J	40 CFR 60, Subpart J	
E.4, E.14, E.16, E.22, E.26, E.29, E.30	FCCU – Metal & Organic HAPs	40 CFR 63, Subpart UUU	40 CFR 63, Subpart UUU	Ongoing	40 CFR 63.1575 and Semiannual
			Operation, Maintenance and Monitoring (OMMP) Plan	Ongoing	Semiannual
E.5, E.15, E.20, E.27, E.28, E.29, E.30	PM	15.0 pound per hour (lb/hr)	Method 5	Annually	
E.6, E.16, E.17, E.20, E.23, E.26, E.27 to E.30	CO	500 ppmvd @ 0% oxygen (O ₂) 1-hr avg; and 100 ppmvd, @ 0% O ₂ 365-day rolling avg.	CEMS	Ongoing	Quarterly
			RATA/ Method 10	Annually	Semiannual
E.7, E.16, E.17, E.20, E.23, E.26, E.27 to E.30	SO ₂	50 ppmvd, @ 0% O ₂ 7-day; and 25 ppmvd @ 0% O ₂ 365-day	CEMS	Ongoing	Quarterly
			RATA/ Method 6	Annually	Semiannual

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
E.8, E.16, E.17, E.20, E.23, E.26, E.27 to E.30	Oxides of Nitrogen (NO _x)	87 ppmvd, @ 0% O ₂ 7-day rolling avg; and 68 ppmvd @ 0% O ₂ 365-day rolling avg.	CEMS	Ongoing	Quarterly
			RATA	Annually	Semiannual
E.6-E.8, E.16, E.17, E.23, E.26, E.27 to E.30	SO ₂ , CO, NO _x , and O ₂ CEMS	Must be equipped with CEMS	RATA	Annually	
E.9, E.18, E.24, E.26, E.29, E.30	VOC, HAP, and Benzene Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	Semiannual
E.10, E.19, E.25, E.26, E.29, E.30	Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 63.648	40 CFR 63.655	40 CFR 63.655 and Semiannual

Conditions

- E.1. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the FCCU Regenerator, that exhibits an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- E.2. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the FCCU Preheater, valves, and pumps, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- E.3. Calumet shall comply with all applicable requirements of 40 CFR 60, Subpart J – Standards of Performance for Petroleum Refineries, as it applies to the FCCU. These regulations shall apply to Calumet’s FCCU catalyst regenerator for CO and SO₂ (Consent Decree Paragraph 15, ARM 17.8.340 and 40 CFR 60, Subpart J).
- E.4. Calumet shall comply with 40 CFR 63, Subpart UUU – National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming units, and Sulfur Recovery Units, as applicable. At all times except startup, shutdown, and malfunction, Calumet shall meet the metal and organic Hazardous Air Pollutant (HAP) emission limitations for the FCCU. In addition, Calumet shall prepare an operation, maintenance, and monitoring plan (OMMP) according to the requirements in 40 CFR 63.1574 and operate at all times according to the procedures in the plan (ARM 17.8.342 and 40 CFR 63, Subpart UUU).
- E.5. The FCCU shall be limited to 15.0 lb/hr of PM (Consent Decree Paragraph 13 and ARM 17.8.749).

- E.6. CO emissions from the FCCU shall not exceed 500 parts per million, volume dry basis (ppmvd), corrected to 0% oxygen (O₂) on a 1-hour average basis; 500 ppmvd, at stack oxygen; and 100 ppmvd, corrected to 0% O₂ on a 365-day rolling average basis (Consent Decree Paragraph 14; 40 CFR 60, Subpart J; and 40 CFR 63, Subpart UUU).
- E.7. SO₂ emissions from the FCCU shall not exceed 50 ppm_{vd}, corrected to 0% O₂, on a 7-day rolling average, except for periods of hydrotreater outages, and 25 ppm_{vd}, corrected to 0% O₂, on a 365-day rolling average (Consent Decree Paragraph 12 and ARM 17.8.749).
- E.8. NO_x emissions from the FCCU shall not exceed 87 ppm_{vd}, corrected to 0% O₂, on a 7-day rolling average, except for periods of startup, shutdown, malfunction or hydrotreater outages, and 68 ppm_{vd}, corrected to 0% O₂, on a 365-day rolling average. (MRC Consent Decree Paragraph 11 and ARM 17.8.749).
- E.9. Calumet shall comply with all the applicable requirements in 40 CFR 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, including compliance with specific requirements in 40 CFR 60, Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified in each applicable emitting unit (ARM 17.8.749, ARM 17.8.342 and 40 CFR 63, Subpart CC).
- E.10. Calumet shall comply with the applicable requirements of 40 CFR 63.648 for equipment leaks (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Compliance Demonstration

- E.11. Calumet shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on each applicable source. Under the visual survey option, once per calendar week, during daylight hours, Calumet shall visually survey for any visible emissions. If visible emissions are observed during the visual survey, Calumet must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 15% opacity (for the FCCU preheater, valves and pumps subject to the 20% opacity limit), or 35% opacity (for the FCCU Regenerator, subject to the 40% opacity limit) based on the Method 9 source test, Calumet shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Calumet shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Calumet of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then Calumet shall perform the Method 9 source tests on the unit for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater (or 40% for the FCCU regenerator), then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

- E.12. Calumet shall install and use a COMS to monitor compliance with the FCCU opacity requirement as well as monitor compliance with the nickel limit in 40 CFR 63, Subpart UUU. Calumet shall install, certify, calibrate, maintain and operate the above-mentioned COMS in accordance with the requirements of 40 CFR §§ 60.11, 60.13 and Part 60 Appendix A, and the applicable performance specification test of 40 CFR Part 60, Appendices B and F (ARM 17.8.340; ARM 17.8.342 and 40 CFR 63, Subpart UUU).
- E.13. Calumet shall meet the requirements of all applicable testing and procedures of ARM 17.8.340, which references 40 CFR 60, Subpart J – Standards of Performance for Petroleum Refineries. These regulations shall apply to the FCCU Regenerator and FCCU feed preheater (Consent Decree Paragraph 15, ARM 17.8.340 and 40 CFR 60, Subpart J).
- E.14. Calumet shall meet the requirements of all testing and monitoring procedures of ARM 17.8.342, which references 40 CFR 63, Subpart UUU – Standards of Performance for Petroleum Refineries, including maintaining records to demonstrate conformance with procedures in Calumet’s OMMP (ARM 17.8.342 and 40 CFR 63, Subpart UUU).
- E.15. Compliance with the PM emission limit of 15.0 lb/hr shall be monitored by conducting a 3-hour performance test representative of normal operating conditions for PM emissions by December 31 of each calendar year. If any performance test undertaken pursuant this section is not representative of normal operating conditions, Calumet shall conduct a subsequent performance test representative of normal operating conditions by no later than 90 days after the test that was not representative (Consent Decree Paragraph 15, ARM 17.8.749).
- E.16. Calumet shall install and use a SO₂, CO, NO_x, and O₂ CEMS to monitor compliance of the FCCU. Calumet shall install, certify, calibrate, maintain and operate the above-mentioned CEMS in accordance with the requirements of 40 CFR §§ 60.11, 60.13 and Part 60 Appendix A, and the applicable performance specification test of 40 CFR Part 60, Appendices B and F (Consent Decree paragraphs 11, 12 & 14; ARM 17.8.340 and 40 CFR 60, Subpart J; and ARM 17.8.342 and 40 CFR 63, Subpart UUU).
- E.17. Calumet shall perform annual source testing using EPA-approved methods or an equivalent method approved by the Department and EPA, in order to monitor compliance with the SO₂ (Method 6), CO (Method 10), and NO_x (Method 7) for the FCCU (ARM 17.8.106). The annual RATA required may be substituted for the annual source tests. In addition, a flow rate RATA must be performed annually and calculations made to determine and report the FCCU data in pounds per hour of SO₂, and CO, to be used as part of the data for monitoring compliance with the refinery-wide mass emission limits (ARM 17.8.749).
- E.18. Calumet shall comply with all the applicable requirements in 40 CFR 63, Subpart CC with specific requirements in 40 CFR 60, Subpart VV (ARM 17.8.340, ARM 17.8.342, 40 CFR 63, Subpart CC and 40 CFR 60, Subpart VV).
- E.19. Compliance with the equipment leak standards shall be monitored in accordance with 40 CFR 63.648, including instituting a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV (ARM 17.8.340 and 40 CFR 60, Subpart VV, ARM 17.8.342 and 40 CFR 63, Subpart CC).

Recordkeeping

- E.20. All source test recordkeeping shall be performed in accordance with the test methods being used and Section III.A.2. For opacity, if visual surveys are performed, Calumet shall maintain a log to verify that the visual surveys were performed as specified in Section III.E.11. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable),

and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.106 and ARM 17.8.1212).

- E.21. Calumet shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60, Subpart J (Consent Decree Paragraph 15, ARM 17.8.340 and 40 CFR 60, Subpart J).
- E.22. Calumet shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 63, Subpart UUU (ARM 17.8.342 and 40 CFR 63, Subpart UUU).
- E.23. Calumet shall maintain a file of all CO, SO₂, and NO_x emissions, including CEMS, monitoring device, and performance testing measurements; all CEMS performance evaluations; all CEMS or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60 (Consent Decree Paragraph 15, ARM 17.8.340 and 40 CFR Part 60).
- E.24. Calumet shall comply with all the applicable recordkeeping requirements in 40 CFR 63, Subpart CC with specific requirements in 40 CFR 60, Subpart VV (ARM 17.8.340, ARM 17.8.342, 40 CFR 63, Subpart CC and 40 CFR 60, Subpart VV).
- E.25. Calumet shall comply with the applicable recordkeeping requirements for equipment leaks in accordance with 40 CFR 63.655 (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- E.26. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

- E.27. Any compliance source test reports and/or logs must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
- E.28. Calumet shall provide quarterly emission reports to demonstrate compliance with Sections III.E.6 to III.E.8 using data required in Section III.E.23. The quarterly report shall include the following (ARM 17.8.1212):
 - a. Emission estimates for NO_x, SO₂ and CO, for each month of the quarter;
 - b. Daily SO₂ CEMS data for the reporting period;
 - c. Hourly NO_x and CO CEMS data for the reporting period;
 - d. Operating times for the FCCU during the reporting period;
 - e. Identification of any periods of excess emissions or other excursions during the reporting period; and
 - f. Monitoring downtime that occurred during the reporting period.
- E.29. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.

E.30. The semiannual report shall provide (ARM 17.8.1212):

- a. A summary of results of any testing (or visual surveys completed) that was performed on the FCCU during the reporting period;
- b. Summary of compliance with 40 CFR 60, Subpart J was maintained;
- c. Summary of compliance with 40 CFR 63, Subpart UUU was maintained;
- d. Summary of compliance with 40 CFR 63, Subpart CC and/or 40 CFR 60, Subpart VV was maintained; and
- e. Summary reporting that compliance with emission limits was maintained and CEMS quarterly reports were submitted as required by Section III.E.28.

F. EU05 – CATALYTIC REFORMER UNIT

EU05a – Reformer Heater

EU05c – Standard Gas Valves

EU05e – Kerosene Heater

EU05g – Naphtha Splitter Reboiler Heater

EU05d – Standard Light Valves

EU05f – Naptha HDS unit heater

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
F.1, F.7, F.12, F.17 to F.20	Opacity – heaters	40%	Method 9	As required by the Department and Section III.A.1	Semiannual
F.2, F.7, F.12, F.17 to F.20	Opacity – valves, Naphtha HDS unit Heater, Naptha Splitter Reboiler Heater	20%			
F.3, F.8, F.13, F.17, F.19, F.20	Catalytic Reformer Unit - Organic & Inorganic HAPs	40 CFR 63, Subpart UUU	40 CFR 63, Subpart UUU	Ongoing	40 CFR 63.1575 and Semiannual
			OMMP Plan	Ongoing	Semiannual
F.4, F.9, F.15, F.17, F.19, F.20	Naphtha HDS unit Heater, Naptha Splitter Reboiler Heater	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	Semiannual
F.5, F.10, F.14, F.17, F.19, F.20	VOC, HAP, and Benzene Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	Semiannual
F.6, F.11, F.16, F.17, F.19., F.20	Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 63.648	40 CFR 63.655	40 CFR 63.655 and Semiannual

Conditions

- F.1. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the Reformer heater, and Kerosene heater, that exhibits an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- F.2. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the valves, the Naphtha charge heater, or the Naptha Reboiler Heater that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)).
- F.3. Calumet shall comply with 40 CFR 63, Subpart UUU – National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units. Calumet shall meet applicable requirements for organic and inorganic HAP emissions from catalytic reforming units that are associated with regeneration of the catalyst used in the unit, set out under 40 CFR 63, Subpart UUU. The

affected source includes vents that are used during the unit depressurization, purging, coke burn, and catalyst rejuvenation. In addition, Calumet shall prepare an OMMP according to the requirements in 40 CFR 63.1574 and operate at all times according to the procedures in the plan (ARM 17.8.342 and 40 CFR 63, Subpart UUU).

- F.4 Calumet shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in all applicable requirements of 40 CFR 60, Subpart Ja – Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007 (ARM 17.8.340 and 40 CFR 60, Subpart Ja).
- F.5 Calumet shall comply with all the applicable requirements in 40 CFR 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, including compliance with specific requirements in 40 CFR 60, Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified in each applicable emitting unit (ARM 17.8.749, ARM 17.8.342 and 40 CFR 63, Subpart CC).
- F.6 Calumet shall comply with the applicable requirements of 40 CFR 63.648 for equipment leaks (40 CFR 63, Subpart CC).

Compliance Demonstration

- F.7. Calumet shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on the applicable source. Under the visual survey option, once per calendar week, during daylight hours, Calumet shall visually survey for any visible emissions. If visible emissions are observed during the visual survey, Calumet must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 15% opacity (for units subject to the 20% opacity limit), or 35% opacity (for units subject to the 40% opacity limit) based on the Method 9 source test, Calumet shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Calumet shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Calumet of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then Calumet shall perform the Method 9 source tests on the unit for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater, then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

- F.8. Calumet shall meet the requirements of all monitoring and testing procedures of ARM 17.8.342, which references 40 CFR Part 63, Subpart UUU – Standards of Performance for Petroleum Refineries, including maintaining records to document conformance with procedures in Calumet's required OMMP (ARM 17.8.742 and 40 CFR 63, Subpart UUU).

- F.9. Calumet shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart Ja (ARM 17.8.340 and 40 CFR 60, Subparts A and Ja).
- F.10 Calumet shall comply with all the applicable requirements in 40 CFR 63, Subpart CC with specific requirements in 40 CFR 60, Subpart VV (ARM 17.8.340, ARM 17.8.342, 40 CFR 63, Subpart CC and 40 CFR 60, Subpart VV).
- F.11. Compliance with the equipment leak standards shall be monitored in accordance with 40 CFR 63.648, including instituting a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV (ARM 17.8.340 and 40 CFR 60, Subpart VV, ARM 17.8.342 and 40 CFR 63, Subpart CC).

Recordkeeping

- F.12. If visual surveys are performed, Calumet shall maintain a log to verify that the visual surveys were performed as specified in Section III.F.7. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer’s initials. If any corrective action is required, the time, date, observer’s initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.1212).
- F.13. Calumet shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 63, Subpart UUU (ARM 17.8.342 and 40 CFR 63, Subpart UUU).
- F.14. Calumet shall comply with all recordkeeping, and notification requirements contained in 40 CFR 60, Subpart Ja (ARM 17.8.340 and 40 CFR 60, Subparts A and Ja).
- F.15 Calumet shall comply with all the applicable recordkeeping requirements in 40 CFR 63, Subpart CC with specific requirements in 40 CFR 60, Subpart VV (ARM 17.8.340, ARM 17.8.342, 40 CFR 63, Subpart CC and 40 CFR 60, Subpart VV).
- F.16 Calumet shall comply with the recordkeeping requirements for equipment leaks in accordance with 40 CFR 63.655 (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- F.17. Calumet shall maintain, under Calumet’s control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

- F.18. Any compliance source test reports and/or logs must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
- F.19. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.
- F.20. The semiannual report shall provide (ARM 17.8.1212):
 - a. A summary of results of any testing that was performed on the Catalytic Reformer Heater, Naphtha Heater, Kerosene Heater, and the valves of the Catalytic Reformer Heater during the reporting period;
 - b. Summary that compliance with 40 CFR 63, Subpart UUU was maintained;

- c. Summary that compliance with 40 CFR 60, Subpart Ja was maintained; and
- d. Summary that compliance with 40 CFR 63, Subpart CC and/or 40 CFR 60, Subpart VV was maintained.

G. EU06 – STORAGE UNIT

EU06a – Storage Facilities

EU06c – Storage LPG

EU06e – Storage Tank Farm

EU06b – Pumps

EU06d – Standard Light Valves

EU06f – Tanks Light

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
G.1, G.13, G.21, G.27 to G.30	Opacity	20%	Method 9/ Weekly Visual Survey	As required by the Department and Section III.A.1	Semiannual
G.2, G.14, G.22, G.27, G.28, G.29, G.30	Tanks #47, #48, #49	Kerosene or Jet Fuel A - Fixed roofs with submerged fill	Verification & inspection	Semiannual	
G.3, G.14, G.22, G.27, G.28, G.29, G.30	Tanks #57	Double seal internal floating roofs	Verification & inspection	Semiannual & annual	
G.4, G.5, G.6, G.15, G.22, G.27, G.28, G.29, G.30	Tanks #52, #122, #123, #124, #125, & #126	Dual-seal external floating roofs	Measure seal gaps on primary and secondary seals	Every 5 years & annual	
G.7, G.15, G.22, G.27, G.28, G.29, G.30	Tanks #127 & #128	Dual-seal external floating roofs	Measure seal gaps on primary and secondary seals	Every 5 years & annual	
G.8, G.16, G.23, G.27, G.28, G.29, G.30	Tank #8	Store light oil	Log	Ongoing	
G.9, G.17, G.20, G.24, G.27, G.28, G.29, G.30	Tanks #47, #48, #49, #52, #57, #122, #123, #124, #125, #126, and other tanks as applicable	40 CFR 60, Subpart Kb	40 CFR 60, Subpart Kb -§60.112b, §60.113b, §60.115b and §60.116b. -fixed roof in combo w/ an internal floating roof - external floating roof - closed vent system & control device	In accordance with 40 CFR 60, Subpart Kb	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
G.10, G.18, G.19, G.25, G.27, G.28, G.29, G.30	Tank #1 – Diethylene Glycol monoether	40 CFR 63, Subpart EEEE	40 CFR 63, Subpart EEEE	40 CFR 63, Subpart EEEE	40 CFR 63, Subpart EEEE
G.11, G.19, G.26, G.27, G.28, G.29, G.30	Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 63.648	40 CFR 63.655	40 CFR 63.655
G.12, G.20, G.26, G.27, G.28, G.29, G.30	Group 1 Vessels (Tank #124) Group 2 Vessels (Tank #125)	40 CFR 63, Subpart CC and 40 CFR 63.119	40 CFR 63, Subpart CC and 40 CFR 63.120, 63.123& 63.148	40 CFR 63, Subpart CC and 40 CFR 63.120, 63.123& 63.148	40 CFR 63.120, 63.123 & 63.148

Conditions

- G.1. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- G.2. Storage tanks #47, #48, and #49 shall be used to store kerosene/Jet Fuel A and shall be equipped with fixed roof tanks (ARM 17.8.749 and ARM 17.8.752).
- G.3. Storage tank #57 shall be equipped with a double seal internal floating roof (ARM 17.8.752).
- G.4. Storage tank #52 shall be used to store premium gasoline and shall be equipped with an external floating roof and a mechanical shoe seal (ultracheck safe sleeve or equivalent) (ARM 17.8.752).
- G.5. Tanks #122 and #123 shall be used to store unleaded gasoline and shall be external floating roof tanks equipped with a mechanical shoe seal (ultracheck safe sleeve or equivalent) (ARM 17.8.749 and ARM 17.8.752).
- G.6. Storage tanks #124, #125, and #126 shall be equipped with dual-seal external floating roofs (ARM 17.8.752).
- G.7. Storage tanks #127 and #128 shall be equipped with dual-seal external floating roofs (ARM 17.8.752).
- G.8. Storage tank #8 shall be used for light oil (ARM 17.8.749).
- G.9. Calumet shall comply with the applicable requirements of 40 CFR 60, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984 for Tanks #47, #48, #49, #52, #57, #122, #123, #124, #125, #126, and other tanks as applicable (ARM 17.8.340 and 40 CFR 60, Subpart Kb).

- G.10. Calumet shall comply with the applicable requirements of 40 CFR 63, Subpart EEEE – National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) for Tank #1, and other tanks as applicable (ARM 17.8.342 and 40 CFR 63, Subpart EEEE).
- G.11. Calumet shall comply with the applicable requirements of 40 CFR 63.648 for equipment leaks (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- G.12. Calumet's storage vessels meeting the specifications in 40 CFR 63.640(e) shall comply with storage vessel requirement contained in 40 CFR 63.646, including compliance with 40 CFR 63.119 for Group 1 or Group 2 Storage Vessels, except as provided by 40 CFR 63.640(n) (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Compliance Demonstration

- G.13. Calumet shall conduct either a semiannual Method 9 test in accordance with the test methods or weekly visual survey of visible emissions. Under the visual survey option, once per calendar week, during daylight hours, Calumet shall visually survey for any visible emissions. If visible emissions are observed during the visual survey, Calumet must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 15% opacity based on the Method 9 source test, Calumet shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Calumet shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Calumet of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then Calumet shall perform the Method 9 source tests on the unit for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater, then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

- G.14. Calumet shall annually inspect the fixed roof tanks #47, #48, and #49 and the double seal internal floating roof on tank #57. Furthermore, Calumet shall maintain the roofs in good working order (ARM 17.8.1213).
- G.15. Calumet shall maintain the dual seal external floating roofs on tanks #52, #122, #123, #124, #125, #126, #127, and # 128. The primary seals shall be visually inspected for gaps every 5 years and the secondary seals shall be visually inspected for holes annually (ARM 17.8.1213).
- G.16. Calumet shall log the storage of anything except light oil in storage tank #8 (ARM 17.8.1213).
- G.17. Calumet shall maintain compliance with the standards for VOCs contained in 40 CFR 60.112b by conducting the testing procedures specified in 40 CFR 60.113b (ARM 17.8.340 and 40 CFR 60, Subpart Kb).

- G.18. Calumet shall maintain compliance with the emission limitations, operating limits, and work practice standards in 40 CFR 63.2346 (ARM 17.8.342 and 40 CFR 63, Subpart EEEE).
- G.19. Compliance with the equipment leak standards shall be monitored in accordance with 40 CFR 63.648, including instituting a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV (ARM 17.8.340 and 40 CFR 60, Subpart VV, ARM 17.8.342 and 40 CFR 63, Subpart CC).
- G.20. Calumet shall monitor compliance with the storage vessels requirements by complying with 40 CFR 63.646, which includes monitoring compliance with the requirements of 40 CFR 60, Subpart Kb (ARM 17.8.1213).

Recordkeeping

- G.21. If visual surveys are performed, Calumet shall maintain a log to verify that the visual surveys were performed as specified in Section III.G.13. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.106 and ARM 17.8.1212).
- G.22. Calumet shall maintain logs of the inspections conducted as required by Section III.G.14 and III.G.15. Each log entry must include the date, time, results of the inspection, and inspector's initials (ARM 17.8.1212).
- G.23. Calumet shall maintain the records required in Section III.G.16 (ARM 17.8.1212).
- G.24. Calumet shall maintain records in accordance with 40 CFR 60.115b, as applicable (ARM 17.8.340 and 40 CFR 60, Subpart Kb).
- G.25. Calumet shall maintain records in accordance with 40 CFR 63.2390, as applicable (ARM 17.8.342 and 40 CFR 63, Subpart EEEE).
- G.26. Calumet shall comply with the recordkeeping requirements for equipment leaks and storage vessels in accordance with 40 CFR 63.655 and 63.123 (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- G.27. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

- G.28. Any compliance source test reports and/or logs must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
- G.29. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.
- G.30. The semiannual report shall provide (ARM 17.8.1212):
 - a. A summary of results of any testing that was performed on any of the storage units during the reporting period;

- b. Summary of logs of tank seal inspections, as required by Section III.G.22;
- c. Summary of the records of the material stored in the tanks were maintained as required and compliance met for the material stored;
- d. Summary of records that were maintained in accordance with §60.115b;
- e. Summary of compliance with 40 CFR 63, Subpart EEEE was maintained; and
- f. Summary of compliance with 40 CFR 63, Subpart CC was maintained.

H. EU07 – UTILITY UNIT

EU07a – Wastewater Treatment Plant
EU07c – Standard Gas Valves

EU07b – Boilers #1 & #2
EU07d – Boiler #3

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
H.1, H.16, H.34, H.40, H.41, H.44, H.45	Opacity – Boilers #1 & #2	40%	Method 9/ Weekly Visual Survey	As required by the Department and Section III.A.1	Semiannual
H.2, H.16, H.34, H.40, H.41, H.43 H.44, H.45	Opacity – Boiler #3	20%			
H.3, H.16, H.34, H.40, H.41 H.44, H.45	Opacity – Wastewater	20%			
H.4, H.17, H.18, H.34, H.35, H.40, H.41, H.42, H.43 H.44, H.45	Caustic scrubbed SWSOH	Incinerate caustic scrubbed SWSOH only in Boilers #1, #2, and #3/ SWSOH meet 40 CFR 60, Subpart J	Certification	Ongoing	
			SWSOH – H ₂ S CEMS or SO ₂ boiler stack CEMS		
			RATA (as applicable)		
H.6, H.19, H.35, H.36, H.40, H.42 H.44, H.45	RFG usage	RFG usage meters	Record RFG usage	Ongoing	
H.5, H.34, H.36, H.40, H.41, H.43 H.44, H.45	Boiler #3 – NO _x Controls and Emissions	Ultra low NO _x Burner (ULNB) and flue gas recirculation (FGR)	NO _x – Method 7	Initial and Every 2 Years	
H.7, H.20, H.21, H.36, H.37, H.40, H.41, H.42 H.44, H.45	SO ₂ – Boilers #1 & #2	355 lb/hr avg. over 3 hr period	SO ₂ /O ₂ CEMS	Ongoing	Quarterly
		648 TPY (148 lb/hr) avg. over 1 yr			
		174 lb/hr avg. over 24 hr			
H.8, H.22, H.23, H.34, H.36, H.40, H.41, H.42 H.44, H.45	NO _x – Boilers #1 & #2	76.50 lb/hr (335 TPY)	Method 7 and Metered RFG Usage	Every 2 yrs	
			Engineering Calculations	Quarterly	
H.9, H.22, H.24, H.34, H.36, H.40, H.41, H.42 H.44, H.45	CO – Boilers #1 & #2	1.0 lb/hr (4.4 TPY)	Method 10 and Metered RFG Usage	Every 2 yrs	
			Engineering Calculations	Quarterly	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
H.10, H.20, H.25, H.31, H.35, H.37, H.40, H.41 H.44, H.45	SO ₂ /O ₂ CEMS – Boilers #1 and #2, and Boiler #3	Install and Operate	40 CFR Part 60, Performance Specifications 2 and 3	Initially	Semiannual
			RATA	Annual	
			40 CFR 60.13 & 40 CFR Part 60, Appendices B and F	Ongoing	
H.11, H.26, H27, H.34, H.35, H.36, H.37, H.40, H.41, H.43 H.44, H.45	SO ₂ – Boiler #3	20 ppm _{vd} at 0% oxygen	SO ₂ /O ₂ CEMS	Ongoing	Quarterly
H.12, H.28, H.29, H.34, H.40, H.41, H.43 H.44, H.45	NO _x – Boiler #3	0.019 lb/MMBtu	Initial performance test	Initially	Quarterly
		1.15 lb/hr	Method 7 and Metered RFG Usage	Every 2 yrs	
H.13, H.28, H.30, H.34, H.36, H.40, H.41, H.43 H.44, H.45	CO – Boiler #3	0.034 lb/MMBtu	Method 10 and Metered RFG Usage	Every 2 yrs	Quarterly
H.14, H.15, H.32, H.33, H.38, H.40 H.44, H.45	Wastewater Surge Tank (Tank #145)	Floating Roof - 40 CFR 60, Subpart QQQ; 40 CFR 63, Subpart CC	40 CFR 60, Subpart QQQ	Initial, Annual & Every 5 yrs	Semiannual
H.14, H.32, H.33, H.38, H.40 H.44, H.45	Wastewater recovered oil tank (“slop oil tank” #144)	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	
H.15, H.33, H.39, H.40 H.44, H.45	Group 1 Wastewater Streams	40 CFR 63, Subpart CC	40 CFR 63.647	Ongoing	

Conditions

H.1 Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the boilers #1 & #2 stack, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

- H.2 Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from boiler #3, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
- H.3 Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the wastewater treatment plant, including the valves, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- H.4 Calumet shall incinerate the caustic scrubbed sour water stripper overhead (SWSOH) gas only in boilers #1 & #2. Incineration of the SWSOH and any refinery fuel gas shall meet the applicable limitations in 40 CFR 60, Subpart J, as required in Section III.B (Consent Decree Paragraph 17, ARM 17.8.749, ARM 17.8.340 and 40 CFR 60, Subpart J).
- H.5 Calumet must install, operate, and maintain ultra low NO_x Burner (ULNB) and flue gas recirculation (FGR) on boiler #3 (ARM 17.8.752).
- H.6 Boiler #3 shall only combust pipeline quality natural gas, refinery fuel gas or caustic scrubbed sour water stripper overhead gas (SWSOH). Incineration of the caustic scrubbed SWSOH and any refinery fuel gas shall meet the applicable limitations in 40 CFR 60, Subpart Ja (Consent Decree Paragraph 17, ARM 17.8.752, ARM 17.8.340 and 40 CFR 60, Subpart Ja).
- H.7 The #1 and #2 boiler stack shall be limited to the following SO₂ emissions (ARM 17.8.749):
- a. 355 lb/hr of SO₂, averaged over a 3-hour period;
 - b. 648 TPY of SO₂, averaged over a 1 year period (148 lb/hr of SO₂ averaged over a 1 year period); and
 - c. 174 lb/hr of SO₂, averaged over a 24-hour period.
- H.8 The #1 and #2 boiler stack shall be limited to 76.50 lb/hr of NO_x and 335 TPY of NO_x (ARM 17.8.752).
- H.9 The #1 and #2 boiler stack shall be limited to 1.00 lb/hr of CO and 4.4 TPY of CO (ARM 17.8.752).
- H.10 Calumet shall install and operate an SO₂ and O₂ CEMS on the stack for the #1 and #2 boilers, and the #3 boiler stack, to be used as the primary analytical instruments to determine compliance with state and federal SO₂ requirements (MRC May 2008 Administrative Order on Consent and ARM 17.8.749).
- H.11 Boiler #3 stack emissions of SO₂ shall not exceed 20 parts per million volume, dry (ppm_{vd}) at 0 percent (%) oxygen determined on a 3-hour rolling average (ARM 17.8.752).
- H.12 Boiler #3 stack emissions of NO_x shall be based on the actual performance as demonstrated by the required initial performance test, but shall not exceed 0.019 lb/MMBtu (or 1.15 lb/hr) on a 3-hour rolling average basis (MRC Consent Decree and ARM 17.8.752).

- H.13. Boiler #3 stack emissions of CO shall not exceed 0.034 lb/MMBtu based on a 3-hour rolling average (ARM 17.8.752).
- H.14. Calumet shall comply with all applicable requirements of 40 CFR 60, Subpart QQQ – Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems for the wastewater “slop oil” tank (Tank #144), the floating roof wastewater surge tank (Tank #145), and any other wastewater components installed or modified since May 1987 that are not subject to 40 CFR Kb, as specified under 40 CFR 60.692-3(d) (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).
- H.15. Calumet shall comply with all applicable requirements of 40 CFR 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries. These regulations shall apply to any Group 1 wastewater streams, as applicable (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Compliance Demonstration

- H.16. Calumet shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on the applicable source. Under the visual survey option, once per calendar week, during daylight hours, Calumet shall visually survey for any visible emissions. If visible emissions are observed during the visual survey, Calumet must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 15% opacity (for Boiler #3 and the wastewater plant/valves, subject to the 20% opacity limit), or 35% opacity (for Boiler #1 and Boiler #2, subject to the 40% opacity limit) based on the Method 9 source test, Calumet shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Calumet shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Calumet of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then Calumet shall perform the Method 9 source tests on the unit for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater (or 40% for applicable units), then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

- H.17. Calumet shall comply with Sections III.H.4 and III.H.6 by firing caustic scrubbed SWSOH in only boilers #1, #2 and/or #3. In order to monitor compliance with the requirements contained in 40 CFR 60, Subpart J (or Subpart Ja for Boiler #3), during all times when the caustic scrubbed SWSOH is incinerated in boilers, Calumet shall conduct either H₂S monitoring of the caustic scrubbed SWSOH stream to demonstrate compliance with the applicable limit (in Section III.B.3 or III.B.4) or SO₂ stack monitoring for the boilers to demonstrate compliance with 20 ppm (dry basis, zero percent excess air) SO₂, as approved by the Department, in writing (Consent Decree Paragraph 17, ARM 17.8.340, 40 CFR 60, Subpart J and 40 CFR 60, Subpart Ja).

H.18. As applicable, Calumet shall install, certify, calibrate, maintain and operate the above-mentioned caustic scrubbed SWSOH CEMS in accordance with the requirements of 40 CFR §§ 60.11, 60.13 and Part 60 Appendix A, and the applicable performance specification test of 40 CFR Part 60 Appendices B and F and 40 CFR 60, Subpart J. These CEMS are a means for monitoring compliance with the relevant emission limits (Consent Decree Paragraph 17, ARM 17.8.740 and 40 CFR 60, Subpart J).

As applicable, the annual RATAs required by 40 CFR Part 60.13 may substitute for the annual source tests provided that the flow rate RATA and the concentration RATA are performed simultaneously and additional calculations are made to determine and report the data in pounds per hour of SO₂.

H.19. Calumet shall operate and maintain an H₂S monitoring system for boilers #1 & #2, and boiler #3 to monitor RFG flow to these boilers. The H₂S monitoring system shall include a continuous RFG flow rate meter for each boiler, and a data acquisition and management system (ARM 17.8.1213).

H.20. Compliance with boilers #1 & #2 SO₂ emission limitations contained in Sections III.H.7 shall be monitored based on the data from the SO₂/O₂ CEMS (MRC May 2008 Administrative Order on Consent and ARM 17.8.749) and a volumetric flow rate monitor installed on the stack for the #1 and #2 boilers (ARM 17.8.1213). The volumetric flow rate monitor shall be installed within 180 days of issuance of OP#2161-03 and shall comply with all applicable provisions of 40 CFR Part 60, Appendix B, Performance Specification 6 and the quality assurance/quality control requirements of 40 CFR 60, Appendix F (ARM 17.8.1213).

H.21. In the event that SO₂/O₂ CEMS is not operational on the #1 and #2 boiler stack, Calumet must (ARM 17.8.749 and ARM 17.8.1213):

- a. notify the Department of the problem within 24 hours (by phone) followed by written notification within 7 days;
- b. continue to monitor compliance using the H₂S CEMS at the fuel gas drum (pre-combustion);
- c. route all SWSOH to the NaHS unit;
- d. repair and/or replace the SO₂/O₂ CEMS equipment and continue to monitor compliance as required in Section II.F; and
- e. notify the Department within 24-hours when the SO₂/O₂ CEMS is back on-line.

H.22. Calumet shall perform Methods 7 and 10 for NO_x and CO, concurrently, on the boilers #1 & #2 stack and submit the results to the Department to monitor compliance with the emission limits contained in Sections III.H.8 and 9. The testing shall occur on an every 2-year basis, and shall be done in accordance with the test methods being used and Section III.A.2 (ARM 17.8.105 and ARM 17.8.106).

H.23. In addition to the testing required in Section III.H.22, compliance with the NO_x emission limits for boilers #1 & #2 shall be monitored using the sum of the actual fuel burning rates and the emission factors developed from the most recent compliance source test conducted while firing refinery fuel gas (ARM 17.8.1212).

- H.24. In addition to the testing required in Section III.H.22, compliance with the CO emission limits for boilers #1 & #2 shall be monitored using the actual fuel burning rates and the emission factors developed from the most recent compliance source test (ARM 17.8.1212).
- H.25. Calumet shall initially certify the boiler #1 and #2 SO₂/O₂ CEMS in accordance with 40 CFR Part 60, Performance Specifications 2 and 3. After initial certification, Calumet shall conduct annual RATA of the #1 and #2 Boiler SO₂/O₂ CEMS in conformance with 40 CFR Part 60, Appendix F. After initial certification, Calumet shall also continue to implement all of the requirements of 40 CFR 60.13 and 40 CFR Part 60, Appendices B and F for the #1 and #2 boilers SO₂/O₂ CEMS (MRC May 2008 Administrative Order on Consent and ARM 17.8.749).
- H.26. Compliance with the SO₂ emission limitation for boiler #3 contained in Section III.H.11 shall be based on the data from the SO₂/O₂ CEMS (ARM 17.8.749).
- H.27. In the event that SO₂/O₂ CEMS is not operational on the boiler #3 stack, Calumet must (ARM 17.8.749 and ARM 17.8.1213):
- a. notify the Department of the problem within 24 hours (by phone) followed by written notification within 7 days;
 - b. continue to monitor compliance using the H₂S CEMS at the fuel gas drum (pre-combustion);
 - c. route all SWSOH to the NaHS unit;
 - d. repair and/or replace the SO₂/O₂ CEMS equipment and continue to monitor compliance as required in Section II.F; and
 - e. notify the Department within 24-hours when the SO₂/O₂ CEMS is back on-line.
- H.28. Calumet shall test boiler #3, for CO and NO_x concurrently, to monitor compliance with the emission limits and/or conditions contained in Section III.H.12 and Section III.H.13. The initial performance source test must be conducted within 60 days of achieving the maximum production rate, but not later than 180 days after initial startup of the boiler. After the initial source test, testing shall continue on an every 2-year basis or according to another testing/monitoring schedule as may be approved by the Department in writing (ARM 17.8.105 and ARM 17.8.749).
- H.29. Compliance with the NO_x emission limit in Section III.H.12 for boiler #3 shall be demonstrated by conducting three, one-hour performance tests representative of normal operating conditions for NO_x emissions by December 31st of each calendar year. If any performance test undertaken pursuant this section is not representative of normal operating conditions, Calumet shall conduct a subsequent performance test representative of normal operating conditions by no later than 90 days after the test that was not representative. After three consecutive years of testing, Calumet may request that the Department re-evaluate the testing requirement provided Calumet has proposed adequate operating parameters for the unit that can be used as indicators of compliance (ARM 17.8.749 and MRC Consent Decree).
- H.30. Compliance with CO emission limitation for boiler #3 contained in Section III.H.13 shall be determined through compliance source testing and by using the actual fuel burning rates and the emission factors developed from the most recent compliance source test (ARM 17.8.749).
- H.31. Calumet shall install and operate an SO₂ and O₂ CEMS on the stack for the boiler #3, to be used as the primary analytical instrument to determine compliance with state and federal SO₂ requirements. Calumet shall initially certify the boiler #3 SO₂/O₂ CEMS in accordance with 40

CFR Part 60, Performance Specifications 2 and 3. After initial certification, Calumet shall conduct annual RATA of the #3 Boiler SO₂/O₂ CEMS in conformance with 40 CFR Part 60, Appendix F. After initial certification, Calumet shall also continue to implement all of the requirements of 40 CFR Part 60.13 and 40 CFR Part 60, Appendices B and F for the boiler #3 SO₂/O₂ CEMS (ARM 17.8.1213).

- H.32. Calumet shall monitor compliance with the floating roof seal and other storage vessel and equipment leak requirements by complying with 40 CFR 60, Subpart QQQ (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).
- H.33. As applicable, Calumet shall monitor compliance with the Group 1 wastewater requirements by complying with 40 CFR 63.647, which includes monitoring compliance in conformance with 40 CFR 61, Subpart FF (ARM 17.8.1213).

Recordkeeping

- H.34. All source test recordkeeping shall be performed in accordance with the test methods being used and Section III.A.2. For opacity, if visual surveys are performed, Calumet shall maintain a log to verify that the visual surveys were performed as specified in Section III.H.16. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.106 and ARM 17.8.1212).
- H.35. Calumet shall maintain records of all SWSOH combustion and during such combustion shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60, Subpart J. Calumet shall maintain a file of all fuel gas H₂S measurements and SO₂ emissions, including CEMS, monitoring device, and performance testing measurements; all CEMS performance evaluations; all CEMS or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60 (Consent Decree Paragraph 17, ARM 17.8.340 and 40 CFR Part 60).
- H.36. Calumet shall maintain records of RFG combustion in boilers #1 & #2, and boiler #3 including any fuel meter performance evaluations or calibration checks, adjustments, and maintenance. In addition, records demonstrating compliance with SO₂, NO_x, and CO emission limitations shall be maintained as required (ARM 17.8.1212).
- H.37. Calumet shall maintain records for the CEMS, including all CEMS performance evaluations, calibration checks, adjustments and maintenance performed on these systems, and all other information required by 40 CFR Part 60 (ARM 17.8.1212).
- H.38. Calumet shall conduct all applicable recordkeeping requirements for the wastewater floating roof surge tank and other applicable equipment, in accordance with 40 CFR 60, Subpart QQQ (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).
- H.39. Calumet shall comply with the recordkeeping requirements for wastewater in accordance with 40 CFR 63.655 (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- H.40. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

- H.41. Any compliance source test reports and/or logs must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
- H.42. Calumet shall provide quarterly reports to monitor compliance with the boilers #1 and #2 emission limits in Sections III.H.7 – III.H.9. The quarterly reports shall include the following (ARM 17.8.1212):
- a. SO₂ emission estimates for #1 and #2 boilers, for each month of the quarter, including:
 - Hourly SO₂ CEMS data for the reporting period;
 - Caustic scrubbed SWSOH – either the daily H₂S concentration and caustic scrubbed SWSOH combustion amount of the caustic scrubbed SWSOH, or the #1 & #2 boiler stack SO₂ concentration on a daily basis;
 - b. NO_x emission estimates for each month of the quarter. The NO_x emission rates shall be reported as an hourly average;
 - c. CO emission estimates for the #1 and #2 boilers, for each month of the quarter. The CO emission rate shall be reported as an hourly average;
 - d. Operating times for #1 and #2 boilers and the caustic scrubbed SWS unit during the reporting period;
 - e. Compliance source test data used to update emission factors, conducted during the reporting period;
 - f. Identification of any periods of excess emissions or other excursions during the reporting period; and
 - g. Monitoring downtime that occurred during the reporting period.
- H.43. Calumet shall provide quarterly reports to monitor compliance with boilers #3 emission limits in Sections III.H.11 – III.H.13. The quarterly reports shall include the following (ARM 17.8.1212):
- a. SO₂ emission estimates for boiler #3, for each month of the quarter, including:
 - Hourly SO₂ CEMS data for the reporting period;
 - Fuel gas H₂S analyzer data for the reporting the data;
 - Caustic scrubbed SWSOH – either the daily H₂S concentration and caustic scrubbed SWSOH combustion amount of the caustic scrubbed SWSOH, or the #3 boiler stack SO₂ concentration on a daily basis;
 - b. NO_x emission estimates for each month of the quarter. The NO_x emission rates shall be reported as an hourly average;
 - c. CO emission estimates for boiler #3, for each month of the quarter. The CO emission rate shall be reported as an hourly average;

- d. Operating times for #3 boiler and the caustic scrubbed SWSOH unit during the reporting period;
 - e. Compliance source test data used to update emission factors, conducted during the reporting period;
 - f. Identification of any periods of excess emissions or other excursions during the reporting period; and
 - g. Monitoring downtime that occurred during the reporting period.
- H.44. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.
- H.45. The semiannual report shall provide (ARM 17.8.1212):
- a. A summary of results of any testing that was performed on the EU07 Utility Unit during the reporting period;
 - b. Summary documentation that caustic scrubbed SWSOH was burned only in boilers #1, #2, or boiler #3 and records maintained as required by Section III.H.35 were maintained;
 - c. A summary of all required CEMS recordkeeping;
 - d. Summary of compliance with 40 CFR 60, Subpart QQQ was maintained;
 - e. Summary of compliance with 40 CFR 63, Subpart CC was maintained; and
 - f. Summary documentation of compliance with emission limits were maintained and quarterly reports were submitted as required by Section III.H.42 and Section III.H.43.

I. EU08 – ALKYLATION UNIT

EU08a – Deisobutanizer Reboiler
EU08c – Pumps Light

EU08b – Standard Light Valves
EU08d – Oily Water Separator

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
I.1, I.7, I.11, I.15, I.16 to I.18	Opacity – deisobutanizer reboiler	40%	Method 9/ Weekly Visual Survey	As required by the Department and Section III.A.1	Semiannual
I.2, I.7, I.11, I.15, I.16 to I.18	Opacity – valves, pumps, oily water separator	20%			
I.3, I.8, I.13, I.15, I.17, I.18.	Pressure Vessels in HF Service	Vent to flare system	Summary log	Semiannual	
I.4, I.9, I.10, I.13, I.14, I.15, I.19, I.20	Alkylation Unit	High quality valves, and pumps and other VOC emission points	40 CFR 60, Subpart VV (40 CFR 60.482-2 & 40 CFR 60.482-7) and 40 CFR 60, Subpart QQQ	Pumps (weekly) valves (monthly) other (quarterly)	
I.5, I.10, I.15, I.17, I.18	VOC, HAP, and Benzene Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	
I.6, I.9, I.14, I.15, I.17, I.18	Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 63.648	40 CFR 63.655	40 CFR 63.655 and Semiannual

Conditions

- I.1. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the Deisobutanizer Reboiler, that exhibits an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- I.2. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the valves, pumps, and oily water separator, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- I.3. All pressure vessels in Hydrofluoric (HF) acid service, except storage tanks, shall be vented to the flare system (ARM 17.8.749 and ARM 17.8.752).

- I.4. The Alkylation unit shall be operated and maintained as follows (ARM 17.8.749 and ARM 17.8.752):
- a. All valves used shall be high quality valves containing high quality packing;
 - b. All open-ended valves shall be of the same quality as the valves described above. They shall have plugs or caps installed on the open end;
 - c. All pumps used in the alkylation plant shall be fitted with the highest quality state-of-the-art mechanical seals;
 - d. All pumps not subject to 40 CFR 63.648 equipment leak requirements shall be monitored and maintained as described in 40 CFR 60.482-2 and all control valves not subject to 40 CFR 63, Subpart CC, equipment leak requirements shall be monitored and maintained as described in 40 CFR 60.482-7. All other potential sources of VOC leaks not subject to 40 CFR 63, Subpart CC equipment leak requirements shall be inspected quarterly for evidence of leakage by visual or other detection methods. Repairs shall be made promptly as described in 40 CFR 482-7d. Records of monitoring and maintenance shall be maintained on site for a minimum of 2 years;
 - e. All process drains shall consist of water seal traps with covers; and
 - f. All equipment shall be operated and maintained as described in 40 CFR 60.692-2, 60.692-6, and 60.693-1. Inspection reports shall be made available for inspection upon request.
- I.5. Calumet shall comply with all the applicable requirements in 40 CFR 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, including compliance with specific requirements in 40 CFR 60, Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified in each applicable emitting unit (ARM 17.8.749, ARM 17.8.342 and 40 CFR 63, Subpart CC).
- I.6. Calumet shall comply with the applicable requirements of 40 CFR 63.648 for equipment leaks (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Compliance Demonstration

- I.7. Calumet shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on the applicable source. Under the visual survey option, once per calendar week, during daylight hours, Calumet shall visually survey for any visible emissions. If visible emissions are observed during the visual survey, Calumet must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 15% opacity (for units subject to the 20% opacity limit), or 35% opacity (for units subject to the 40% opacity limit) based on the Method 9 source test, Calumet shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Calumet shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Calumet of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then Calumet shall perform the Method 9 source tests on the unit for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater (or 40% for applicable units), then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

- I.8. Calumet shall certify that all pressure vessels in HF Acid service, except storage tanks, are vented to the flare (ARM 17.8.1213).
- I.9. Compliance with the requirements for the pumps and control valves not subject to 40 CFR 63, Subpart CC shall meet the requirements of 40 CFR 60.482-2 and 40 CFR 60.482-7, respectively, that includes, but is not limited to the following (ARM 17.8.1213):
 - a. Each pump in light liquid service shall be monitored monthly to determine leaks by methods specified in §60.485;
 - b. Each pump in light liquid service shall be visually inspected each calendar week for indications of liquids dripping from the pump seal; and
 - c. Each control valve shall be monitored as per 40 CFR 60.482-7 to detect leaks by the methods specified in §60.485.
- I.10. Compliance with the equipment leak standards shall be monitored in accordance with 40 CFR 63, Subpart CC, including instituting a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV (ARM 17.8.340 and 40 CFR 60, Subpart VV, ARM 17.8.342 and 40 CFR 63, Subpart CC).

Recordkeeping

- I.11. If visual surveys are performed, Calumet shall maintain a log to verify that the visual surveys were performed as specified in Section III.I.7. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.1212).
- I.12. Calumet shall maintain a log in accordance with Section III.I.8, to document that all pressure vessel in HF Acid Service are vented to the flare, which will specifically include the reasons for every case in which an applicable pressure vessel is not vented to the flare (ARM 17.8.1213).
- I.13. Calumet shall maintain a log on site of the repairs necessary to maintain compliance with Section III.I.9 and III.I.10. Each log entry must include the date, time, summary of the necessary repairs, and observer's initials (ARM 17.8.1212).
- I.14. Calumet shall comply with the applicable recordkeeping requirements of 40 CFR 63.648 for equipment leaks (ARM 17.8.342 and 40 CFR 63, Subpart CC).

I.15. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

I.16. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

I.17. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.

I.18. The semiannual report shall provide (ARM 17.8.1212):

- a. A summary of results of any testing that was performed on the Alkylation Unit during the reporting period;
- b. Summary of the records are maintained that document that the pressure vessels are vented to flare, as required by Section III.I.8; and
- c. Summary of the log of actions taken to repair the valves or pumps.
- d. Summary of the applicable reporting and recordkeeping requirements of 40 CFR 63, Subpart CC.

J. EU09 – HYDROGEN PLANTS

EU09a – Hydrogen Plant #1 Reformer Furnace Stack (natural gas)

EU09b – Hydrogen Plant #2 Reformer Furnace Stack (natural gas)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
J.1, J.8, J.16, J.22 to J.25	Opacity	20%	Method 9/ Weekly Visual Survey	As required by the Department and Section III.A.1	Semiannual
J.2, J.9, J.11, J.16, J.17, J.14, J.22 to J.25	NO _x – Hydrogen Plant #1	0.07 lb/MMBtu 1.90 lb/hr 8.3 TPY	Actual fuel burning rates & latest testing emission factors	Monthly	
			Method 7	As required by the Department and Section III.A.1	
J.3, J.9, J.11, J.16, J.17, J.14, J.22 to J.25	CO – Hydrogen Plant #1	0.93 lb/hr 4.1 TPY	Actual fuel burning rates & latest testing emission factors	Monthly	
			Method 10	As required by the Department and Section III.A.1	
J.4, J.10, J.12, J.16, J.18, J.22 to J.25	NO _x – Hydrogen Plant #2	0.033 lb/MMBtu 2.64 lb/hr 11.56 TPY	Method 7	Annually	
		Heater equipped with Ultra Low NO _x Burner (ULNB)	3-one hour performance tests representative of normal operation		
J.5, J.13, J.19, J.22 to J.25	Hydrogen Plants	Purchased natural gas only	Summary log	Semiannual	
J.6, J.14, J.20, J.22, J.24, J.25	Hydrogen Plants	40 CFR 60, Subpart QQQ §60.692-1 to §60.692-5 and §60.693-1 & §60.693-2, except during periods of startup, shutdown, & malfunction. process drains have water seal traps with covers.	In accordance w/ 40 CFR 60, Subpart QQQ	In accordance w/ 40 CFR 60, Subpart QQQ	Semiannual & in accordance w/ 40 CFR 60.698

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
J.7, J.15, J.21, J.22, J.24, J.25	Hydrogen Plants	40 CFR 60, Subpart GGG – high quality valves & open-ended valves (plugs or caps) w/ high quality packing	§60.482-1 to §60.482-10 may comply w/ §60.483-1 or §60.483-2 §60.485 except as provided in §60.593 - compliance w/ §60.486 & §60.487, etc.	In accordance w/ 40 CFR 60, Subpart GGG and Subpart VV	Semiannual
		40 CFR 60, Subpart VV- monitoring & maintenance program			

Conditions

- J.1. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- J.2. Hydrogen Plant #1 NO_x emissions shall not exceed the limit of 0.07 lb/MMBtu, 1.90 lb/hr, or 8.3 ton/yr (ARM 17.8.752).
- J.3. Hydrogen Plant #1 CO emissions shall not exceed the limit of 0.93 lb/hr, or 4.1 ton/yr (ARM 17.8.752).
- J.4. Hydrogen Plant #2 must be equipped with a next-generation ultra-low NO_x burner (ULNB) on the heater and NO_x emissions shall not exceed the limit of 0.033 lb/MMBtu (ARM 17.8.752 and MRC Consent Decree).
- J.5. The hydrogen plant reformer heaters shall only be fired with purchased commercially available natural gas, which includes recycled gas from the hydrogen plants, and shall not be fired with refinery gas or refinery LPG. The purge (vent) gas used as fuel in the hydrogen plant reformer heaters shall be sulfur free (ARM 17.8.752).
- J.6. Calumet shall comply with all applicable standards and limitations, and the reporting, record-keeping, and notification requirements, as required by 40 CFR 60, Subpart QQQ – Standards of Performance for Petroleum Refining Wastewater Systems for the hydrogen plants that includes, but is not limited to the following (ARM 17.8.340 and 40 CFR 60, Subpart QQQ):
- a. Calumet shall meet the applicable requirements of §60.692-1 to §60.692-5 and §60.693-1 and §60.693-2, except during periods of startup, shutdown, and malfunction; and
 - b. All process drains shall consist of water seal traps with covers.
- J.7. Calumet shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements, as required by 40 CFR 60, Subpart GGG – Standards of Performance for Equipment Leaks in Petroleum Refineries for the hydrogen plants, that includes, but is not limited to the following (ARM 17.8.340 and 40 CFR 60, Subpart GGG):

- a. All valves used shall be high quality valves containing high quality packing;
- b. All open-ended valves shall be of the same quality as the valves described above. They shall have plugs or caps installed on the open end; and
- c. A monitoring and maintenance program, as described under 40 CFR Part 60, Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Industry, shall be instituted.

Compliance Demonstration

J.8. As required by the Department and Section III.A.1, Calumet shall conduct either a semiannual Method 9 test in accordance with the test methods or weekly visual survey of visible emissions. Under the visual survey option, once per calendar week, during daylight hours, Calumet shall visually survey for any visible emissions. If visible emissions are observed during the visual survey, Calumet must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 15% opacity based on the Method 9 source test, Calumet shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Calumet shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Calumet of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then Calumet shall perform the Method 9 source tests on the unit for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater, then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

- J.9. As required by the Department and Section III.A.1, Calumet shall conduct Method 7 and 10 tests for Hydrogen Plant #1 reformer heater to monitor compliance with the NO_x and CO emission limitations in accordance with the test methods being used and Section III.A.2 (ARM 17.8.105 and ARM 17.8.1213).
- J.10. Compliance with the NO_x emission limitation in III.J.4 for Hydrogen Plant #2 reformer heater shall be demonstrated by conducting three, one-hour performance tests representative of normal operating conditions for NO_x emissions by December 31 of each calendar year. After three consecutive years of testing, Calumet may request that the Department re-evaluate the testing requirement provided Calumet has proposed adequate operating parameters for the unit that can be used as indicators of compliance (ARM 17.8.105 and ARM 17.8.1213).
- J.11. Compliance determinations for NO_x and CO emission limits for hydrogen plant #1 reformer heater shall be based upon actual fuel burning rates and the emission factors developed from the most recent compliance source test and shall be calculated monthly (ARM 17.8.1213).

- J.12. Compliance determination for the NO_x emission limit for hydrogen plant #2 reformer heater shall be based on actual fuel burning rates and the emission factors developed from the results of the three, one-hour performance tests representative of normal operating conditions (ARM 17.8.1213).
- J.13. Calumet shall monitor compliance with Section III.J.5 by firing only purchased commercially available natural gas, which includes recycled gas from the hydrogen plant and not firing refinery gas or refinery LPG (ARM 17.8.1213).
- J.14. Calumet shall monitor compliance in accordance with 40 CFR 60, Subpart QQQ (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).
- J.15. As applicable, Calumet shall monitor compliance as instructed by 40 CFR 60, Subpart GGG. This includes, but is not limited to the following (ARM 17.8.340 and 40 CFR 60, Subpart GGG):
- a. Compliance with §60.482-1 to §60.482-10;
 - b. Calumet may elect to comply with §60.483-1 or §60.483-2;
 - c. Compliance with §60.485 except as provided in §60.593; and
 - d. Compliance with §60.486 and §60.487.

Recordkeeping

- J.16. All source test recordkeeping shall be performed in accordance with the test methods being used and Section III.A.2. For opacity, if visual surveys are performed, Calumet shall maintain a log to verify that the visual surveys were performed as specified in Section III.J.5. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.106 and ARM 17.8.1212).
- J.17. Calumet shall maintain a record, on site, of the actual fuel burning rates of the hydrogen plant #1 reformer heater and submit it to the Department upon request. The record must include the date, time, actual fuel burning rates, calculated NO_x and CO emissions, and reviewer's initials (ARM 17.8.1212).
- J.18. Calumet shall maintain a record, on site, of the of the actual fuel burning rates of the hydrogen plant #2 reformer heater and the results of the three, one-hour performance tests representative of normal operating conditions to the Department upon request. The record must include the date, time, actual fuel burning rates, calculated NO_x, and reviewer's initials (ARM 17.8.1212).
- J.19. Calumet shall maintain records of the type(s) of fuel burned in the hydrogen plants in accordance with Section III.J.13 (ARM 17.8.1212).
- J.20. Calumet shall keep records in accordance with 40 CFR 60, Subpart QQQ §60.697 (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).
- J.21. Calumet shall keep records in accordance with 40 CFR 60, Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subpart GGG).

J.22. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

J.23. Any compliance source test reports (and/or visual survey log) must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

J.24. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.

J.25. The semiannual report shall provide (ARM 17.8.1212):

- a. A summary of results of any testing that was performed on either Hydrogen Plant during the reporting period;
- b. Summary of the log required by III.J.17, III.J.18, and III.J.19 with type(s) of fuels combusted (including if any fuels other than natural gas were burned) and with calculated emissions has been maintained;
- c. Summary that all required inspections have been carried out as required by 40 CFR Part 60.698, and compliance with applicable requirements of 40 CFR 60, Subpart QQQ has been maintained; and
- d. Summary showing compliance with applicable requirements of 40 CFR 60, Subpart GGG has been maintained.

K. EU10 – GASOLINE TRUCK LOADING RACK

EU10a – Gasoline Truck Loading Rack

EU10b – Vapor Combustion Unit (VCU)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
K.1, K.9, K.18, K.23, K.25, K.26	Gasoline Loading Rack	40 CFR 63, Subpart CC	40 CFR 63, Subpart R	On-going	Semiannual
K.2, K.10, K.14, K.23 to K.26	VOC	10 mg/L	40 CFR Part 63.425	Every 5 years	
K.3, K.11, K.17, K.23 to K.26	CO	10 mg/L	Method 10	As required by the Department and Section III.A.1	
K.4, K.11, K.17, K.23 to K.26	NO _x	4 mg/L	Method 7	As required by the Department and Section III.A.1	
K.5, K.12, K.17, K.23 to K.26	Opacity	10%	Method 9	As required by the Department and Section III.A.1	
K.5, K.12, K.17, K.23 to K.26	Particulate emissions	0.10 gr/dscf corrected to 12% CO ₂	Method 5	As required by the Department and Section III.A.1	
K.6, K.13, K.19, K.23, K.25, K.26	Loading rack	Equipped w/ vapor collection system and VCU	Summary log	Semiannually	
K.6, K.13, K.19, K.23, K.25, K.26	Gasoline cargo tank	≤4500 Pa during loading	Performance testing	Every 5 years	
K.6, K.13, K.19, K.23, K.25, K.26	Pressure-vacuum vent	No opening @ P<4500 Pa	Summary log	During loading	
K.6, K.13, K.19, K.23, K.25, K.26	Vapor Collection System	No passing of VOC from one position to another	Summary log	During loading	
K.6, K.13, K.19, K.23, K.25, K.26	Loading of liquid	Vapor-tight gasoline cargo tanks	Log	Loading procedures	
K.6, K.13, K.19, K.23, K.25, K.26	Loading of tanks	Limited to compatible tanks	Summary log	During loading	
K.6, K.13, K.19, K.23, K.25, K.26	Gasoline cargo tanks	Vapor recovery system connected during each loading	Summary log	During loading	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
K.14, K.20, K.23, K.25, K.26	VCU	CPMS	Summary log	Ongoing	
K.7, K.15, K.21, K.23, K.25, K.26	Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 63.648	40 CFR 63.655	
K.8, K.16, K.22, K.23, K.25, K.26	VCU stack	35 ft above grade	Summary log	Ongoing	

Conditions

- K.1. Calumet shall comply with all applicable requirements of 40 CFR 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, including the requirement to comply with specific requirements under 40 CFR 63, Subpart R. These regulations shall apply to the truck loading rack and its VCU, and any other equipment, as appropriate (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- K.2. The total VOC emissions to the atmosphere from the VCU, due to loading liquid product into cargo tanks, shall not exceed 10.0 milligrams per liter (mg/L) of gasoline loaded (ARM 17.8.342 and ARM 17.8.752 and 40 CFR 63, Subpart R).
- K.3. The total CO emissions to the atmosphere from the VCU, due to loading liquid product into cargo tanks, shall not exceed 10.0 mg/L of gasoline loaded (ARM 17.8.752).
- K.4. The total NO_x emissions to the atmosphere from the VCU, due to loading liquid product into cargo tanks, shall not exceed 4.0 mg/L of gasoline loaded (ARM 17.8.752).
- K.5. Calumet shall not cause or authorize to be discharged into the atmosphere from the VCU (ARM 17.8.752):
- a. Any visible emissions that exhibit an opacity of 10% or greater; and
 - b. Any particulate emissions in excess of 0.10 grains per dry standard cubic foot (gr/dscf) corrected to 12% carbon dioxide (CO₂).
- K.6. The bulk loading gasoline and distillates truck loading rack shall be operated and maintained as follows:
- a. Calumet's tank truck loading rack shall be equipped with a vapor collection system designed to collect the organic compound vapors displaced from cargo tanks during gasoline product loading (ARM 17.8.342 and 40 CFR 63, Subpart R).
 - b. Calumet's collected vapors shall be routed to the VCU at all times. In the event the VCU is inoperable, Calumet may continue to load distillates with a Reid vapor pressure of less than 27.6 kilopascals, provided the Department is notified in accordance with the requirements of ARM 17.8.110 (ARM 17.8.752).
 - c. The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the gasoline cargo tank from exceeding 4,500 Pascal's (Pa) (450 millimeters [mm] of water) during product loading. This level shall not be exceeded when measured by the procedures specified in the test methods and procedures in 40 CFR 60.503(d) (ARM 17.8.342 and 40 CFR 63, Subpart CC).

- d. No pressure-vacuum vent in the permitted terminal's vapor collection system shall begin to open at a system pressure less than 4,500 Pa (450 mm of water) (ARM 17.8.342 and 40 CFR 63, Subpart R).
- e. The vapor collection system shall be designed to prevent any VOC vapors, collected at one loading position, from passing to another loading position (ARM 17.8.342 and 40 CFR 63, Subpart R).
- f. Loading of liquid products into gasoline cargo tanks shall be limited to vapor-tight gasoline cargo tanks using the following procedures (ARM 17.8.342 and 40 CFR 63, Subpart R):
 - i. Calumet shall obtain annual vapor tightness documentation, described in the test methods and procedures in 40 CFR 63.425(e), for each gasoline cargo tank that is to be loaded at the truck loading rack;
 - ii. Calumet shall require the cargo tank identification number to be recorded as each gasoline cargo tank is loaded at the terminal;
 - iii. Calumet shall cross-check each tank identification number, obtained during product loading, with the file of tank vapor tightness documentation within 2 weeks after the corresponding cargo tank is loaded;
 - iv. Calumet shall notify the owner or operator of each non-vapor-tight cargo tank, loaded at the truck loading rack, within 3 weeks after the loading has occurred; and
 - v. Calumet shall take the necessary steps to ensure that any non-vapor-tight cargo tank will not be reloaded at the truck loading rack until vapor tightness documentation for that cargo tank is obtained, that documents that:
 - a. The gasoline cargo tank meets the applicable test requirements in 40 CFR 63.425(e) of this permit; and
 - b. For each gasoline cargo tank failing the test requirements in 40 CFR 63.425(f) or (g), the gasoline cargo tank must either:
 - (1) Before the repair work is performed on the cargo tank, meet test requirements in 40 CFR 63.425 (g) or (h), or
 - (2) After repair work is performed on the cargo tank, before or during the tests in 40 CFR 63.425 (g) or (h), subsequently passes, the annual certification test described in 40 CFR 63.425(e).
- g. Calumet shall ensure that loadings of gasoline cargo tanks, at the truck loading rack, are made only into cargo tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system (ARM 17.8.342 and 40 CFR 63, Subpart R).
- h. Calumet shall ensure that the terminal's and the cargo tank's vapor recovery systems are connected during each loading of a gasoline cargo tank at the truck loading rack (ARM 17.8.342 and 40 CFR 63, Subpart R).

- K.7. Calumet shall monitor and maintain all pumps, shutoff valves, relief valves and other piping and valves associated with the gasoline truck loading rack as described in 40 CFR 60.482-1 through 60.482-10 and 40 CFR 63.648 (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- K.8. The VCU stack shall be at least 35 feet above grade (ARM 17.8.749).

Compliance Demonstration

- K.9. Compliance with the gasoline loading rack provisions contained in 40 CFR 63.650 shall be performed in accordance with the specified provisions of 40 CFR 63, Subpart R. Calumet shall comply with all test methods and procedures as specified by Subpart R §63.425(a) through (c), and 63.425(e). This shall apply to, but not be limited to, the bulk gasoline and distillate truck loading rack, the vapor processing system, and all gasoline equipment (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- K.10. The gasoline truck loading VCU shall be tested for total organic compounds, and compliance monitored with the emission limitation contained in Section III.K.2 on an every 5-year basis, or according to another testing/monitoring schedule as may be approved by the Department and Section III.A.1. Calumet shall perform the test methods and procedures as specified in 40 CFR 63.425, Subpart R (ARM 17.8.105 and ARM 17.8.342, 40 CFR 63, Subpart CC and 40 CFR 63, Subpart R).
- K.11. As required by the Department and Section III.A.1, the gasoline truck loading VCU shall be tested for CO and NO_x, concurrently, using Method 10 and Method 7, respectively. The tests shall be conducted in accordance with the test methods being used and Section III.A.2, to monitor compliance with the emission limitations contained in Sections III.K.3 and 4 (ARM 17.8.105).
- K.12. As required by the Department and Section III.A.1, the VCU shall be tested for opacity and particulate emissions using Method 9 and Method 5, respectively. The tests shall be conducted in accordance with the test methods being used and Section III.A.2, to monitor compliance with the emission limitations contained in Section III.K.5 (ARM 17.8.105 and ARM 17.8.1213).
- K.13. Calumet shall confirm that all the truck loading rack requirements of Section III.K.6 are met, and maintain a log, as appropriate (ARM 17.8.1213).
- K.14. Calumet shall install, calibrate, certify, operate and maintain a thermocouple with an associated recorder as a continuous parameter monitoring system (CPMS). The CPMS shall be located on the VCU firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs in accordance with 40 CFR 63.427, in order to demonstrate compliance with 40 CFR 63, Subpart R. Calumet shall operate the VCU in a manner not to go below the operating parameter values established using the procedures in 40 CFR 63.425 (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- K.15. Compliance with the equipment leak standards in Section III.K.7 shall be monitored in accordance with 40 CFR 63.648, including instituting a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV (ARM 17.8.340 and 40 CFR 60, Subpart VV, ARM 17.8.342 and 40 CFR 63, Subpart CC).
- K.16. Compliance with Section III.K.8 shall be accomplished by maintaining the VCU stack at a height no less than 35 feet above grade (ARM 17.8.1213).

Recordkeeping

- K.17. All source test recordkeeping shall be performed in accordance with the test methods being used and Section III.A.2 (ARM 17.8.106).
- K.18. Calumet shall comply with the recordkeeping requirements for gasoline truck loading provisions in accordance with 40 CFR 63.655, including keeping records of gasoline cargo tanks loadings as required by 40 CFR 63.428 (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- K.19. Calumet shall maintain records in conformance with Section III.K.13 (ARM 17.8.1212).
- K.20. Calumet shall maintain the CPMS records as required by Section III.K.14 (ARM 17.8.1212).
- K.21. Calumet shall maintain on-site records, as required by 40 CFR 60.482-1 through 10 and 40 CFR 63.648 (ARM 17.8.1212).
- K.22. Calumet shall maintain a log of the VCU stack height, noting if any changes occur, to document compliance with Section III.K.16 (ARM 17.8.1213).
- K.23. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

- K.24. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
- K.25. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.
- K.26. The semiannual report shall provide (ARM 17.8.1212):
 - a. A summary of results of any testing that was performed on the gasoline loading rack during the reporting period;
 - b. Summary showing compliance with the gasoline loading rack provisions of 40 CFR 63, Subpart CC were maintained;
 - c. Summary documentation that the loading rack is equipped with and operating the vapor collection system and VCU, and that compliance with the truck loading rack requirements in Section III.K.6 were maintained;
 - d. Summary documentation that the CPMS demonstrated that the VCU operated within the designated temperature range at all times that Calumet loaded gasoline through the truck loading rack;
 - e. Summary of the records that were maintained in accordance with 40 CFR 60.482-1 through 10 and 40 CFR 63.648; and
 - f. Summary of the log monitoring compliance with Section III.K.8 was maintained.

L. EU11 – ASPHALT AND POLYMER-MODIFIED ASPHALT (PMA) UNIT

EU11 – PMA Unit

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Method	Demonstration Frequency	Reporting Requirements
L.1, L.9, L.13, L.15, L.17 to L.20	Opacity from Asphalt Tanks (Tank #138, #50, #102) constructed since May 26, 1981	40 CFR 60, Subpart UU – 0%, except for one consecutive 15- minute period in any 24-hour period	Method 9/ Weekly Visual Survey	As required by the Department and Section III.A.1	Semiannual
L.2, L.9, L.10, L.14, L.17 to L.20	Opacity from Asphalt Tanks constructed from November 23, 1968 to May 26, 1981	20%			
L.3, L.9, L.10, L.14, L.17 to L.20	Opacity from Asphalt Tanks constructed prior to November 23, 1968	40%			
L.4, L.11, L.16, L.17, L.18, L.19, L.20, L.21	PMA Unit	40 CFR 60, Subpart GGG – high quality valves & open- ended valves (plugs or caps) with high quality packing - monitoring & maintenance program as 40 CFR Part 60, Subpart VV	-§60.482-1 to §60.482-10 -may comply with §60.483- 1 or §60.483-2 -§60.485 except as provided in §60.593 - compliance w/ §60.486 & §60.487, etc.	In accordance with 40 CFR 60, Subpart GGG	
L.4, L.11, L.17, L.18, L.19, L.20, L.21	Pumps	Standard Single Seals	Summary log	Semiannual	
L.4, L.11, L.16, L.18, L.19, L.20	Pumps valves/ heavy liquid service pressure relief devices/light liquid or heavy liquid service & flanges & other connectors	Standards described in 40 CFR 60.482-8 Repairs promptly as described in 40 CFR 60.482-7e	Monitoring, visual inspections etc. as required by 40 CFR 60.482-8 and 40 CFR 60.482-7e	As required by 40 CFR 60.482-8 and 40 CFR 60.482-7e	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
L.5 , L.13, L.17, L.18, L.20, L.21	Specified storage tanks (#9, #50, #55, #56, #69, #102, #110, #112, #130, #132, #133, #135, #137, #138, #139, and #140)	Store heavy oil	Log	Ongoing	
L.6, L.7, L.12, L.13, L.17, L.18, L.20, L.21	Specified storage tank heaters (#50, #102, #135, #137, #139, and #140)	Combust only natural gas or refinery fuel gas (meeting the requirements of 40 CFR 60, Subpart J or Ja)	Log	Ongoing	
L.8, L.14, L.17, L.18, L.20, L.21	(3) 0.750 MMBtu/hr fire-tube tank heaters #130, #132, and #133	Fired with natural gas Fired with refinery fuel gas (meeting the requirements of 40 CFR 60, Subpart J and Calumet Consent Decree)	Summary log	Semiannual	

Condition

- L.1. Calumet shall not cause to be discharged into the atmosphere from any asphalt tank constructed or modified since May 26, 1981, exhaust gases with opacity greater than 0% except for one consecutive 15-minute period in any 24-hour period when the transfer lines are being blown for clearing (ARM 17.8.340 and 40 CFR 60, Subpart UU).
- L.2. For any asphalt tank constructed between November 23, 1968, and May 26, 1981, or other PMA equipment constructed since November 23, 1968, Calumet shall not cause to be discharged into the atmosphere exhaust gases with an opacity of 20% or greater, averaged over 6 consecutive minutes (ARM 17.8.304).
- L.3. For any tank or PMA equipment constructed prior to November 23, 1968, Calumet shall not cause to be discharged into the atmosphere exhaust gases with an opacity of 40% or greater, averaged over 6 consecutive minutes (ARM 17.8.304).
- L.4. Calumet shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements as required by 40 CFR 60, Subpart GGG - Standards of Performance for Equipment Leaks in Petroleum Refineries for the PMA Unit, which includes, but is not limited to the following (ARM 17.8.752, ARM 17.8.340 and 40 CFR Part 60, Subpart GGG):
- a. All open-ended valves shall have plugs or caps installed on the open end (ARM 17.8.752).

- b. All pumps in the PMA unit shall be equipped with standard single seals (ARM 17.8.752).
 - c. All pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors shall meet the standards described in 40 CFR 60.482-8 (ARM 17.8.752). Repairs shall be made promptly as described in 40 CFR 60.482-7e.
- L.5. Storage tanks #9, #50, #55, #56, #69, #102, #110, #112, #130, #132, #133, #135, #137, #138, #139, and #140 shall be used for heavy oil (ARM 17.8.749).
 - L.6. Asphalt tank heaters #135, #137, #138, #139, and #140 shall burn commercially available natural gas or refinery fuel gas in compliance with 40 CFR 60, Subpart J (ARM 17.8.749, Consent Decree, and 40 CFR 60, Subpart J).
 - L.7. Asphalt tank heaters #50 and #102, shall burn only commercially available natural gas or refinery fuel gas in compliance with 40 CFR 60, Subpart Ja (ARM 17.8.749, ARM 17.8.340, and 40 CFR 60, Subpart Ja).
 - L.8. The three 0.75 MMBtu/hr PMA tank heaters (Tanks #130, #132, and #133), shall be fired with commercially available natural gas or refinery fuel gas (ARM 17.8.752, Consent Decree, and 40 CFR 60, Subpart J).

Compliance Demonstration

- L.9. Calumet shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on the applicable source. Under the visual survey option, once per calendar week, during daylight hours, Calumet shall visually survey for any visible emissions. If visible emissions are observed during the visual survey, Calumet must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 0% (for units subject to the 0% opacity), 15% opacity (for units subject to the 20% opacity limit), or 35% opacity (for units subject to the 40% opacity limit) based on the Method 9 source test, Calumet shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Calumet shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Calumet of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then Calumet shall perform the Method 9 source tests on the unit for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater (or 40% for applicable units), then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

- L.10. As required by the Department and Section III.A.1, Calumet shall perform a Method 9 test in accordance with the test methods being used and Section III.A.2 to demonstrate compliance with Sections III.L.2 and III.L.3. Each observation period shall be a minimum of 6 minutes, unless

any one reading is above the applicable limit (greater than 20%, or 40%); then the observation period shall be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.105 and ARM 17.8.1213).

- L.11. Calumet shall evaluate the valves, pumps, and flanges in the PMA unit to monitor the requirements in Section III.L.4. Compliance with the equipment leak standards shall be monitored by complying with 40 CFR Part 60.482-8 and 40 CFR 60.482-7e (ARM 17.8.1213).
- L.12. Calumet shall log the storage of anything except heavy oil in tanks #9, #50, #55, #56, #69, #102, #110, #112, #130, #132, #133, #135, #137, #138, #139, and #140 (ARM 17.8.1213).
- L.13. Calumet shall maintain records demonstrating that only commercially available natural gas or refinery fuel gas were fired in asphalt tank heaters #50, #102, #135, #137, #138, #139, and #140, as required in Section III.L.6 and III.L.7 (ARM 17.8.1213).
- L.14. Calumet shall maintain records demonstrating that only commercially available commercially available natural gas or refinery fuel gas was fired in the tank heaters #130, #132, and #133, as required in Section III.L.8 (ARM 17.8.1213).

Recordkeeping

- L.15. All source test recordkeeping shall be performed in accordance with the test methods being used and Section III.A.2. For opacity testing, if visual surveys are performed, Calumet shall maintain a log to verify that the visual surveys were performed as specified in Section III.L.9. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.106 and ARM 17.8.1212).
- L.16. Calumet shall maintain a log of any valves, pumps, or flanges in the PMA Unit that fail to meet the requirements in Section III.L.4, as well as maintaining leak prevention records in accordance with 40 CFR Part 60.482-8 and in 40 CFR Part 60.482-7e (ARM 17.8.1212).
- L.17. Calumet shall maintain the records required in Sections III.L.12 to L.14 (ARM 17.8.1212).
- L.18. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

- L.19. Any compliance source test reports (and/or visual survey log) must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
- L.20. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.
- L.21. The semiannual report shall provide (ARM 17.8.1212):
 - a. A summary of results of any testing that was performed on the PMA Unit during the reporting period;

- b. Summary of compliance with 40 CFR 60, Subpart GGG that was maintained, including certification that leak prevention records were maintained in accordance with 40 CFR Part 60.482-8 and 40 CFR Part 60.482-7e;
- c. Summary of the records of the material stored in the tanks were maintained as required and compliance met for the material stored; and
- d. Summary that records of the fuel(s) combusted in the asphalt heaters were maintained as required and compliance met for the fuel combusted.

M. EU12 – COOLING TOWERS

EU12 – Cooling Towers

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
M.1., M.3, M.5, M.7 to M.10	Opacity	20%	Method 9/ Weekly Visual Survey	As required by the Department and Section III.A.1	Semiannual
M.2, M.4, M.6, M.7, M.9, M.10	Cooling water towers	Inspect ions	pH and hydrocarbon content	2 per shift	
			Appearance of towers and related equip	1 per shift	

Condition

- M.1. Calumet shall not cause to be discharged into the atmosphere from the cooling towers with an opacity of 20 percent or greater, averaged over any 6 consecutive minutes (ARM 17.8.752). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- M.2. The cooling towers’ water shall be monitored twice per shift for changes, specifically potential of hydrogen (pH) and hydrocarbon content. The appearance of the towers and related equipment shall be inspected at least once per shift (ARM 17.8.749 and ARM 17.8.752).

Compliance Demonstration

- M.3. Calumet shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on the applicable source. Under the visual survey option, once per calendar week, during daylight hours, Calumet shall visually survey for any visible emissions. If visible emissions are observed during the visual survey, Calumet must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 15% opacity based on the Method 9 source test, Calumet shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Calumet shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Calumet of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then Calumet shall perform the Method 9 source tests on the unit for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater, then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

M.4. Calumet shall maintain a log on site of all inspections completed on the cooling towers (ARM 17.8.1213).

Recordkeeping

M.5. If visual surveys are performed, Calumet shall maintain a log to verify that the visual surveys were performed as specified in Section III.M.3. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.1212).

M.6. Each log entry must include the date, time, pH and hydrocarbon content, and observer's initials. Furthermore, the every other log entry must include if there was something different about the appearance of the towers and related equipment (ARM 17.8.1212).

M.7. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

M.8. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

M.9. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.

M.10. The semiannual report shall provide (ARM 17.8.1212):

- a. A summary of results of any testing that was performed on the Cooling Towers during the reporting period; and
- b. Summary showing that the cooling tower inspection log was maintained as required by Section III.M.6.

N. EU13 – SODIUM HYDROSULFIDE (NaHS) UNIT

EU13 – NaHS Unit

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
N.1, N.3, N.5, N.7 to N.10	Opacity	20%	Method 9/ Weekly Visual Survey	As required by the Department and Section III.A.1	Semiannual
N.2, N.4, N.6, N.7, N.9, N.10	NaHS Unit	40 CFR 60, Subpart GGG – high quality valves & open-ended valves (plugs or caps) with high quality packing - monitoring & maintenance program as 40 CFR 60, Subpart VV	-\$60.482-1 to §60.482-10 -may comply with §60.483-1 or §60.483-2 -\$60.485 except as provided in §60.593 -compliance w/ §60.486 & §60.487, etc.	In accordance with 40 CFR 60, Subpart GGG	

Conditions

- N.1. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- N.2. Calumet shall comply with all applicable standards and limitations, and the reporting, record-keeping, and notification requirements, as required by 40 CFR 60, Subpart GGG – Standards of Performance for Equipment, Leaks in Petroleum Refineries for the NaHS Unit that includes, but is not limited to the following (ARM 17.8.340 and 40 CFR 60, Subpart GGG):
- a. All valves used shall be high quality valves containing high quality packing;
 - b. All open-ended valves shall be of the same quality as the valves described above. They shall have plugs or caps installed on the open end; and
 - c. A monitoring and maintenance program as described under 40 CFR 60, Subpart VV shall be instituted.

Compliance Demonstration

- N.3. Calumet shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on the applicable source. Under the visual survey option, once per calendar week, during daylight hours, Calumet shall visually survey for any visible emissions. If visible emissions are observed during the visual survey, Calumet must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If

visible emissions meet or exceed 15% opacity based on the Method 9 source test, Calumet shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Calumet shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Calumet of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then Calumet shall perform the Method 9 source tests on the unit for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater, then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

- N.4. Calumet shall monitor compliance as instructed by 40 CFR 60, Subpart GGG, that includes, but is not limited to the following (ARM 17.8.340 and 40 CFR 60, Subpart GGG):
- a. Compliance with §60.482-1 to §60.482-10;
 - b. Calumet may elect to comply with §60.483-1 or §60.483-2;
 - c. Compliance with §60.485 except as provided in §60.593; and
 - d. Compliance with §60.486 and §60.487.

Recordkeeping

- N.5. If visual surveys are performed, Calumet shall maintain a log to verify that the visual surveys were performed as specified in Section III.N.3. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.1212).
- N.6. Calumet shall keep records in accordance with 40 CFR 60, Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subpart GGG).
- N.7. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

- N.8. Any compliance source test reports (and/or visual survey log) must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
- N.9. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.

N.10. The semiannual report shall provide (ARM 17.8.1212):

- a. A summary of results of any testing that was performed on the NaHS Unit during the reporting period; and
- b. Summary of the records that were maintained in accordance with 40 CFR 60, Subpart GGG.

O. EU14 – DIESEL/GAS HYDROTREATER UNIT (HTU)

EU14 – Diesel/Gas HTU (natural gas)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
O.1, O.7, O.12, O.16 to O.19	Opacity	20%	Method 9/ Weekly Visual Survey	As required by the Department and Section III.A.1	Semiannual
O.2, O.8, O.13, O.16, O.18, O.19	HTU Unit	40 CFR 60, Subpart QQQ -§60.692-1 to §60.692-5 and §60.693-1 & §60.693-2 except during periods of startup, shutdown, & malfunction. - process drains have water seal traps with covers.	In accordance w/ 40 CFR 60, Subpart QQQ	In accordance w/ 40 CFR 60, Subpart QQQ	Semiannual & in accordance w/ §60.698
O.3, O.9, O.14, O.16, O.18, O.19	HTU Unit	40 CFR 60, Subpart GGG – high quality valves & open-ended valves (plugs or caps) w/ high quality packing - monitoring & maintenance program as 40 CFR 60, Subpart VV	-§60.482-1 to §60.482-10 -may comply w/ §60.483-1 or §60.483-2 -§60.485 except as provided in §60.593 - compliance w/ §60.486 & §60.487, etc.	In accordance w/ 40 CFR 60, Subpart GGG	
O.4, O.10, O.16, O.18, O.19	HTU Unit	Fired only on purchased natural gas or refinery fuel gas that meets 40 CFR 60, Subpart J requirements	Summary		
O.5, O.11, O.12, O.15 to O.19	HTU Unit Heater – NO _x	0.07 lb/MMBtu, 1.42 lb/hr, or 6.2 TPY	Actual fuel burning rates and emission factors from the most recent compliance source test	Semiannual	
			Method 7	As required by the Department and Section III.A.1	
			Low NO _x burners	Ongoing	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
O.6, O.11, O.12, O.15 to O.19	HTU Unit Heater – CO	0.79 lb/hr, or 3.5 TPY	Actual fuel burning rates and emission factors from the most recent compliance source test	Semiannual	
			Method 10	As required by the Department and Section III.A.1	

Conditions

- O.1. Calumet shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the Diesel/Gas HTU heater stack, that exhibits opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.752). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).
- O.2. Calumet shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements, as required by 40 CFR 60, Subpart QQQ – Standards of Performance for Petroleum Refining Wastewater Systems for the HTU Unit, that includes, but is not limited to the following (ARM 17.8.340 and 40 CFR 60, Subpart QQQ):
- a. Calumet shall meet the requirements of §60.692-1 to §60.692-5 and §60.693-1 and §60.693-2, except during periods of startup, shutdown, and malfunction; and
 - b. All process drains shall consist of water seal traps with covers.
- O.3. Calumet shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements as required by 40 CFR 60, Subpart GGG – Standards of Performance for Equipment Leaks in Petroleum Refineries for the HTU Unit, which includes, but is not limited to the following (ARM 17.8.340 and 40 CFR Part 60, Subpart GGG):
- a. All valves used shall be high quality valves containing high quality packing.
 - b. All open-ended valves shall be of the same quality as the valves described above. They shall have plugs or caps installed on the open end.
 - c. A monitoring and maintenance program, as described under 40 CFR Part 60, Subpart VV, shall be instituted.
- O.4. Calumet shall fire only commercially available natural gas or refinery fuel gas that meets 40 CFR 60, Subpart J requirements in the diesel/gas oil HTU heater (ARM 17.8.752).
- O.5. The HTU heater stack's NO_x emissions shall not exceed 0.07 lb/MMBtu, 1.42 lb/hr, or 6.2 TPY (ARM 17.8.752).

O.6. The HTU heater stack's CO emissions shall not exceed 0.79 lb/hr, or 3.5 TPY (ARM 17.8.752).

Compliance Demonstration

O.7. Calumet shall conduct either a semiannual Method 9 source test or a weekly visual survey of visible emissions on the applicable source. Under the visual survey option, once per calendar week, during daylight hours, Calumet shall visually survey for any visible emissions. If visible emissions are observed during the visual survey, Calumet must conduct a Method 9 source test. The Method 9 source test must begin within one hour of any observation of visible emissions. If visible emissions meet or exceed 15% opacity based on the Method 9 source test, Calumet shall immediately take corrective action to contain or minimize the source of emissions. If corrective actions are taken, then Calumet shall immediately conduct a subsequent visual survey (and subsequent Method 9 source test if visible emissions remain) to monitor compliance. The person conducting the visual survey shall record the results of the survey (including the results of any Method 9 source test performed) in a log, including any corrective action taken. Conducting a visual survey does not relieve Calumet of the liability for a violation determined using Method 9 (ARM 17.8.101(27)).

If the visual surveys are not performed once per calendar week as specified above during the reporting period, then Calumet shall perform the Method 9 source tests on the unit for that reporting period.

Method 9 source tests must be performed in accordance with the Montana Source Test Protocol and Procedures Manual, except that prior notification of the test is not required. Each observation period must be a minimum of 6 minutes unless any one reading is 20% or greater, then the observation period must be a minimum of 20 minutes or until a violation of the standard has been documented, whichever is a shorter period of time (ARM 17.8.1213).

O.8. Calumet shall monitor compliance in accordance with 40 CFR 60, Subpart QQQ (ARM 17.8.1213).

O.9. Calumet shall monitor compliance, as instructed by 40 CFR 60, Subpart GGG, that includes, but is not limited to the following (ARM 17.8.340 and 40 CFR 60, Subpart GGG):

- a. Compliance with §60.482-1 to §60.482-10;
- b. Calumet may elect to comply with §60.483-1 or §60.483-2;
- c. Compliance with §60.485 except as provided in §60.593; and
- d. Compliance with §60.486 and §60.487.

O.10. Calumet shall monitor compliance with Section III.O.4 by firing the HTU heater with only commercially available natural gas or refinery fuel gas that meets 40 CFR 60, Subpart J requirements (ARM 17.8.1213).

O.11. Compliance monitoring for NO_x and CO emission limits for the diesel/gas oil HDS heater shall be based upon actual fuel burning rates and emission factors developed from the most recent compliance source test calculated monthly. As required by the Department and Section III.A.1, Calumet shall conduct a Method 7 and 10 for NO_x and CO, respectively, in accordance with the test methods being used and Section III.A.2 (ARM 17.8.105). Also, Calumet shall operate and maintain the low NO_x burners (ARM 17.8.1213).

Recordkeeping

- O.12. All source test recordkeeping shall be performed in accordance with the test methods being used and Section III.A.2. For opacity, if visual surveys are performed, Calumet shall maintain a log to verify that the visual surveys were performed as specified in Section III.O.7. Each log entry must include the date, time, results of survey (and results of subsequent Method 9, if applicable), and observer's initials. If any corrective action is required, the time, date, observer's initials, and any preventive or corrective action taken must be recorded in the log (ARM 17.8.106 and ARM 17.8.1212).
- O.13. Calumet shall keep records in accordance with 40 CFR 60, Subpart QQQ §60.697 (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).
- O.14. Calumet shall keep records in accordance with 40 CFR 60, Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subpart GGG).
- O.15. Calumet shall maintain a record on site, the actual fuel burning rates of the HTU heater and submit the log to the Department upon request. The record must include the date, time, actual fuel burning type and rates, calculated emissions, and reviewer's initials (ARM 17.8.106).
- O.16. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

- O.17. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
- O.18. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.
- O.19. The semiannual report shall provide (ARM 17.8.1212):
 - a. A summary of results of any source testing that was performed on the HTU during the reporting period;
 - b. Summary documentation that only commercially available natural gas or refinery fuel gas that meets 40 CFR 60, Subpart J requirements was fired in the HTU heater;
 - c. Summary of compliance with 40 CFR 60, Subpart QQQ was maintained;
 - d. Summary documentation that compliance with 40 CFR 60, Subpart GGG was maintained; and
 - e. Summary of the emission calculation log, as required by Section III.O.14.

P. EU15 – GASOLINE RAILCAR LOADING RACK

EU15a – Gasoline Railcar Loading Rack

EU15b – Vapor Combustion Unit (VCU)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
P.1, P.10, P.16, P.20, P.26, P.28, P.29	Railcar Loading Rack (gasoline)	40 CFR 63, Subpart CC	40 CFR 63, Subpart R	On-going	Semiannual
P.2, P.11, P.21, P.26, P.28, P.29	Railcar Loading Rack (non- gasoline) - naphtha	40 CFR 63, Subpart EEEE	40 CFR 63, Subpart EEEE	Ongoing	
P.3, P.12, P.26, P.28, P.29	VOC	10 mg/L	40 CFR 63.425	Every 5 years	
P.4, P.13, P.19, P.26 to P.29	CO	10 mg/L	Method 10	As required by the Department and Section III.A.1	
P.5, P.13, P.19, P.26 to P.29	NO _x	4 mg/L	Method 7	As required by the Department and Section III.A.1	
P.6, P.14, P.19, P.26 to P.29	Opacity	10%	Method 9	As required by the Department and Section III.A.1	
P.6, P.14, P.19, P.26 to P.29	Particulate emissions	0.10 gr/dscf corrected to 12% CO ₂	Method 5	As required by the Department and Section III.A.1	
P.7, P.15, P.22, P.26, P.28, P.29	Loading rack	Equipped w/ vapor collection system	Log	Semiannually	
P.7, P.15, P.22, P.26, P.28, P.29	Loading rack vapors	Vapor Combustion Unit	Log	Semiannually	
P.7, P.15, P.22, P.26, P.28, P.29	Gasoline cargo tank	≤4500 Pa during loading	Performance testing	Every 5 years	
P.7, P.15, P.22, P.26, P.28, P.29	Pressure- vacuum vent	No opening @ P<4500 Pa	Log	During loading	
P.7, P.15, P.22, P.26, P.28, P.29	Vapor Collection System	No passing of VOC from one position to another	Log	During loading	
P.7, P.15, P.22, P.26, P.28, P.29	Loading of liquid	Vapor-tight gasoline cargo tanks	Log	Loading procedures	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
P.7, P.15, P.22, P.26, P.28, P.29	Loading of tanks	Limited to compatible tanks	Log	During loading	
P.7, P.15, P.22, P.26, P.28, P.29	Gasoline cargo tanks	Vapor recovery system connected during each loading	Log	During loading	
P.16, P.23, P.26, P.28, P.29	VCU	CPMS	Log	Ongoing	
P.8, P.17, P.24, P.26, P.28, P.29	Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 63, Subpart R and 40 CFR 60, Subpart VV	Ongoing	
P.9, P.18, P.25, P.26, P.28, P.29	VCU stack	30 ft above grade	Log	None	Semiannual

Conditions

- P.1. Calumet shall comply with all applicable requirements of 40 CFR 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, including the requirement to comply with specific requirements under 40 CFR 63, Subpart R. These regulations shall apply to the railcar gasoline loading rack and its' VCU, and any other equipment, as appropriate (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- P.2. Calumet shall comply with the applicable requirements of 40 CFR 63, Subpart EEEE – National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) for railcar loading of naphtha, and any other non-gasoline HAP-containing organic liquids, as applicable (ARM 17.8.342 and 40 CFR 63, Subpart EEEE).
- P.3. The total VOC emissions to the atmosphere from the VCU, due to loading gasoline into railcars, shall not exceed 10.0 mg/L of gasoline loaded (ARM 17.8.342 and ARM 17.8.752 and 40 CFR 63, Subpart R).
- P.4. The total CO emissions to the atmosphere from the VCU, due to loading gasoline into railcars, shall not exceed 10.0 mg/L of gasoline loaded (ARM 17.8.752).
- P.5. The total NO_x emissions to the atmosphere from the VCU, due to loading gasoline into railcars, shall not exceed 4.0 mg/L of gasoline loaded (ARM 17.8.752).
- P.6. Calumet shall not cause or authorize to be discharged into the atmosphere from the VCU (ARM 17.8.752):
- a. Any visible emissions that exhibit an opacity of 10% or greater; and
 - b. Any particulate emissions in excess of 0.10 gr/dscf corrected to 12% CO₂.

P.7. The bulk gasoline railcar loading rack shall be operated and maintained as follows:

- a. Gasoline and naphtha will be the only products loaded from the gasoline railcar loading rack (ARM 17.8.749).
- b. Calumet's gasoline railcar loading rack shall be equipped with a vapor recovery system designed to collect the organic compounds displaced from railcar product loading and vent those emissions to the VCU (ARM 17.8.342 and 40 CFR 63, Subpart CC and ARM 17.8.752).
- c. Calumet shall operate and maintain the VCU to control VOC and HAP emissions during the loading of gasoline or naphtha in the gasoline railcar loading rack. Calumet's collected vapors shall be routed to the VCU at all times (ARM 17.8.752).
- d. The vapor recovery system shall be designed to prevent any VOC vapors collected at one loading position from passing to another loading position (ARM 17.8.749).
- e. Loading of gasoline and naphtha railcars shall be restricted to the use of submerged fill and dedicated normal service (ARM 17.8.752).
- f. Calumet shall ensure that loading of railcars at the gasoline railcar loading rack are made only into railcars equipped with vapor recovery equipment that is compatible with the terminal's vapor recovery system (ARM 17.8.749).
- g. Loadings of gasoline into gasoline cargo tanks shall be limited to vapor-tight gasoline cargo tanks, using procedures as listed in 40 CFR 63, Subpart R (ARM 17.8.342 and 40 CFR 63, Subpart CC, and ARM 17.8.752).
 - i. Calumet shall obtain annual vapor tightness documentation described in the test methods and procedures in 40 CFR 63.425(e) for each gasoline cargo tank that is to be loaded at the railcar loading rack;
 - ii. Calumet shall require the cargo tank identification number to be recorded as each gasoline cargo tank is loaded at the terminal;
 - iii. Calumet shall cross-check each tank identification number obtained during product loading with the file of tank vapor tightness documentation within two weeks after the corresponding cargo tank is loaded;
 - iv. Calumet shall notify the owner or operator of each non-vapor-tight cargo tank loaded at the railcar loading rack within 3 weeks after the loading has occurred; and
 - v. Calumet shall take the necessary steps to ensure that any non-vapor-tight cargo tank will not be reloaded at the railcar loading rack until vapor tightness documentation for that cargo tank is obtained which documents that:
 - aa. The gasoline cargo tank meets the applicable test requirements in 40 CFR 63.425(e) to this permit;
 - bb. For each gasoline cargo tank failing the test requirements in 40 CFR 63.425(f) or (g), the gasoline cargo tank must either:

1. Before the repair work is performed on the cargo tank, meet the test requirements in 40 CFR 63.425 (g) or (h), or
 2. After repair work is performed on the cargo tank, before or during the tests in 40 CFR 63.425 (g) or (h), subsequently passes, the annual certification test described in 40 CFR 63.425(e).
- h. Calumet shall ensure that the terminal's and the railcar's vapor recovery systems are connected during each loading of a railcar at the gasoline railcar loading rack (ARM 17.8.749).
 - i. The vapor recovery and liquid loading equipment shall be designed and operated to prevent gauge pressure in the gasoline railcar from exceeding 4,500 Pa (450 mm of water) during gasoline loading. This level shall not be exceeded when measured by the procedures specified in 40 CFR 60.503(d) (ARM 17.8.342 and 40 CFR 63, Subpart CC).
 - j. No pressure-vacuum vent in the permitted terminal's vapor recovery system shall begin to open at a system pressure less than 4,500 Pa (450 mm of water) (ARM 17.8.749).
- P.8. Calumet shall comply with the applicable provisions of 40 CFR 60, Subpart VV, including the requirement to monitor and maintain all pumps, shutoff valves, relief valves, and other piping and valves associated with the gasoline railcar loading rack as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.749, ARM 17.8.342 and 40 CFR 63, Subpart CC).
- P.9. The gasoline railcar loading rack VCU stack exhaust exit shall be at least 30 feet above grade (ARM 17.8.749).

Compliance Demonstration

- P.10. Compliance with the gasoline loading rack provisions contained in 40 CFR 63.650 shall be performed in accordance with the specified provisions of 40 CFR 63, Subpart R. Calumet shall comply with all test methods and procedures as specified by Subpart R §63.425(a) through (c), and 63.425(e). This shall apply to, but not be limited to, the bulk gasoline and distillate railcar loading rack, the vapor processing system, and all gasoline equipment (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- P.11. Calumet shall maintain compliance with the emission limitations, operating limits, and work practice standards in 40 CFR 63.2346, as applicable (ARM 17.8.342 and 40 CFR 63, Subpart EEEE).
- P.12. The gasoline railcar loading rack VCU shall be initially tested for total organic compounds and compliance demonstrated with the emission limitation contained in Section III.P.3 within 180 days of initial start up. Additional testing shall occur on an every 5-year basis or according to another testing/monitoring schedule as may be approved by the Department. Calumet shall perform the test methods and procedures as specified in 40 CFR 63.425, Subpart R (ARM 17.8.105, ARM 17.8.342, and 40 CFR 63, Subpart CC).
- P.13. The gasoline railcar loading VCU shall be initially tested for CO and NO_x, concurrently, and compliance demonstrated with the emission limitations contained in Sections III.P.4 and III.P.5 within 180 days of initial startup. Additional testing shall occur as required by the Department and Section III.A.1 (ARM 17.8.105).

- P.14. As required by the Department and Section III.A.1, the VCU shall be tested for opacity and particulate emissions using Method 9 and Method 5, respectively. The tests shall be conducted in accordance with the test methods being used and Section III.A.2 to monitor compliance with the emission limitations contained in Section III.P.6 (ARM 17.8.105 and ARM 17.8.1213).
- P.15. Calumet shall confirm that all the railcar loading rack requirements of Section III.P.7 are met, and maintain a log, as appropriate (ARM 17.8.1213).
- P.16. Calumet shall install, calibrate, certify, operate and maintain a thermocouple with an associated recorder as a CPMS. A CPMS shall be located on the VCU firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs in accordance with 40 CFR 63.427, in order to demonstrate compliance with 40 CFR 63, Subpart R. Calumet shall operate the VCU in a manner not to go below the operating parameter values established using the procedures in 40 CFR 63.425 (ARM 17.8.342, 40 CFR 63, Subpart CC and ARM 17.8.1213).
- P.17. Compliance with the equipment leak standards in Section III.P.8 shall be monitored in accordance with 40 CFR 63.648, including instituting a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV (ARM 17.8.340 and 40 CFR 60, Subpart VV, ARM 17.8.342 and 40 CFR 63, Subpart CC).
- P.18. Compliance with Section III.P.9 shall be accomplished by maintaining the VCU stack at a height no less than 30 feet above grade (ARM 17.8.1213).

Recordkeeping

- P.19. All source test recordkeeping shall be performed in accordance with the test methods being used and Section III.A.2 (ARM 17.8.106).
- P.20. Calumet shall comply with the recordkeeping requirements for gasoline railcar loading provisions in accordance with 40 CFR 63.655, including keeping records of gasoline cargo tanks loadings as required by 40 CFR 63.428 (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- P.21. Calumet shall maintain records in accordance with 40 CFR 63.2390, as applicable (ARM 17.8.342 and 40 CFR 63, Subpart EEEE).
- P.22. Calumet shall maintain records in conformance with Section III.P.15 (ARM 17.8.1212).
- P.23. Calumet shall maintain the CPMS records as required by Section III.P.16 (ARM 17.8.1212).
- P.24. Calumet shall maintain on-site records, as required by 40 CFR 60.482-1 through 10 and 40 CFR 63.648 (ARM 17.8.1212).
- P.25. Calumet shall maintain a log of the VCU stack height, noting if any changes occur, to document compliance with Section III.P.18 (ARM 17.8.1213).
- P.26. Calumet shall maintain, under Calumet's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department and EPA, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

- P.27. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
- P.28. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.
- P.29. The semiannual report shall provide (ARM 17.8.1212):
- a. A summary of results of any testing that was performed on the gasoline railcar loading rack during the reporting period;
 - b. Summary information showing that compliance with the gasoline loading rack provisions of 40 CFR 63, Subpart CC was maintained;
 - c. Summary information that compliance with 40 CFR 63, Subpart EEEE was maintained;
 - d. Summary documentation showing that the loading rack is equipped with and operating both a vapor collection system and a VCU and compliance with the railcar loading rack requirements in Section III.P.7 were met;
 - e. Summary information showing that records were maintained in accordance with 40 CFR 60.482-1 through 10 and 40 CFR 63.648; and
 - f. Summary of the log demonstrating compliance with Section III.P.9.

SECTION IV NON-APPLICABLE REQUIREMENTS

Air Quality Administrative Rules of Montana and Federal Regulations identified as not applicable to the facility or to a specific emissions unit at the time of the permit issuance are listed below (ARM 17.8.1214). Calumet did not provide a list of non-applicable requirements.

SECTION V GENERAL PERMIT CONDITIONS

A. Compliance Requirements

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(a)-(c)&(e), §1206(6)(c)&(b)

1. The permittee must comply with all conditions of the permit. Any noncompliance with the terms or conditions of the permit constitutes a violation of the Montana Clean Air Act, and may result in enforcement action, permit modification, revocation and reissuance, or termination, or denial of a permit renewal application under ARM Title 17, Chapter 8, Subchapter 12.
2. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
3. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. If appropriate, this factor may be considered as a mitigating factor in assessing a penalty for noncompliance with an applicable requirement if the source demonstrates that both the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations, and that such health, safety or environmental impacts were unforeseeable and could not have otherwise been avoided.
4. The permittee shall furnish to the Department, within a reasonable time set by the Department (not to be less than 15 days), any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Department copies of those records that are required to be kept pursuant to the terms of the permit. This subsection does not impair or otherwise limit the right of the permittee to assert the confidentiality of the information requested by the Department, as provided in 75-2-105, MCA.
5. Any schedule of compliance for applicable requirements with which the source is not in compliance with at the time of permit issuance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it was based.
6. For applicable requirements that will become effective during the permit term, the source shall meet such requirements on a timely basis unless a more detailed plan or schedule is required by the applicable requirement or the Department.

B. Certification Requirements

ARM 17.8, Subchapter 12, Operating Permit Program §1207 and §1213(7)(a)&(c)-(d)

1. Any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12, shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
2. Compliance certifications shall be submitted by February 15 of each year, or more frequently if otherwise specified in an applicable requirement or elsewhere in the permit. Each certification must include the required information for the previous calendar year (i.e., January 1 – December 31).

3. Compliance certifications shall include the following:
 - a. The identification of each term or condition of the permit that is the basis of the certification;
 - b. The identification of the method(s) or other means used by the owner or operator for determining the status of compliance with each term and condition during the certification period, consistent with ARM 17.8.1212;
 - c. The status of compliance with each term and condition for the period covered by the certification, *including whether compliance during the period was continuous or intermittent* (based on the method or means identified in ARM 17.8.1213(7)(c)(ii), as described above); and
 - d. Such other facts as the Department may require to determine the compliance status of the source.
4. All compliance certifications must be submitted to the EPA, as well as to the Department, at the addresses listed in the Notification Addresses Appendix of this permit.

C. Permit Shield

ARM 17.8, Subchapter 12, Operating Permit Program §1214(1)-(4)

1. The applicable requirements and non-federally enforceable requirements are included and specifically identified in this permit, and the permit includes a precise summary of the requirements not applicable to the source. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements and any non-federally enforceable requirements as of the date of permit issuance.
2. The permit shield described in 1 above shall remain in effect during the appeal of any permit action (renewal, revision, reopening, or revocation and reissuance) to the Board of Environmental Review (Board), until such time as the Board renders its final decision.
3. Nothing in this permit alters or affects the following:
 - a. The provisions of Section 7603 of the FCAA, including the authority of the administrator under that section;
 - b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
 - c. The applicable requirements of the Acid Rain Program, consistent with Section 7651g(a) of the FCAA;
 - d. The ability of the administrator to obtain information from a source pursuant to Section 7414 of the FCAA;
 - e. The ability of the Department to obtain information from a source pursuant to the Montana Clean Air Act, Title 75, Chapter 2, MCA;
 - f. The emergency powers of the Department under the Montana Clean Air Act, Title 75, Chapter 2, MCA; and

- g. The ability of the Department to establish or revise requirements for the use of Reasonably Available Control Technology (RACT) as defined in ARM Title 17, Chapter 8. However, if the inclusion of a RACT into the permit pursuant to ARM Title 17, Chapter 8, Subchapter 12, is appealed to the Board, the permit shield, as it applies to the source's existing permit, shall remain in effect until such time as the Board has rendered its final decision.
- 4. Nothing in this permit alters or affects the ability of the Department to take enforcement action for a violation of an applicable requirement or permit term demonstrated pursuant to ARM 17.8.106, Source Testing Protocol.
- 5. Pursuant to ARM 17.8.132, for the purpose of submitting a compliance certification, nothing in these rules shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance. However, when compliance or noncompliance is demonstrated by a test or procedure provided by permit or other applicable requirements, the source shall then be presumed to be in compliance or noncompliance unless that presumption is overcome by other relevant credible evidence.
- 6. The permit shield will not extend to minor permit modifications or changes not requiring a permit revision (see Sections I & J).
- 7. The permit shield will extend to significant permit modifications and transfer or assignment of ownership (see Sections K & O).

D. Monitoring, Recordkeeping, and Reporting Requirements

ARM 17.8, Subchapter 12, Operating Permit Program §1212(2)&(3)

- 1. Unless otherwise provided in this permit, the permittee shall maintain compliance monitoring records that include the following information:
 - a. The date, place as defined in the permit, and time of sampling or measurement;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of such analyses; and
 - f. The operating conditions at the time of sampling or measurement.
- 2. The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. All monitoring data, support information, and required reports and summaries may be maintained in computerized form at the plant site if the information is made available to Department personnel upon request, which may be for either hard copies or computerized format. Strip-charts must be maintained in their original form at the plant site and shall be made available to Department personnel upon request.

3. The permittee shall submit to the Department, at the addresses located in the Notification Addresses Appendix of this permit, reports of any required monitoring by February 15 and August 15 of each year, or more frequently if otherwise specified in an applicable requirement or elsewhere in the permit. The monitoring report submitted on February 15 of each year must include the required monitoring information for the period of July 1 through December 31 of the previous year. The monitoring report submitted on August 15 of each year must include the required monitoring information for the period of January 1 through June 30 of the current year. All instances of deviations from the permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official, consistent with ARM 17.8.1207.

E. Prompt Deviation Reporting

ARM 17.8, Subchapter 12, Operating Permit Program §1212(3)(b)

The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. To be considered prompt, deviations shall be reported as part of the routine reporting requirements under ARM 17.8.1212(3)(b) and, if applicable, in accordance with the malfunction reporting requirements under ARM 17.8.110, unless otherwise specified in an applicable requirement.

F. Emergency Provisions

ARM 17.8, Subchapter 12, Operating Permit Program §1201(13) and §1214(5), (6)&(8)

1. An “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation and causes the source to exceed a technology-based emission limitation under this permit due to the unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of reasonable preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates through properly signed, contemporaneous logs, or other relevant evidence, that:
 - a. An emergency occurred and the permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was, at the time, being properly operated;
 - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in the permit; and
 - d. The permittee submitted notice of the emergency to the Department within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirements of ARM 17.8.1212(3)(b). This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
3. These emergency provisions are in addition to any emergency, malfunction or upset provision contained in any applicable requirement.

G. Inspection and Entry

ARM 17.8, Subchapter 12, Operating Permit Program §1213(3)&(4)

1. Upon presentation of credentials and other requirements as may be required by law, the permittee shall allow the Department, the administrator, or an authorized representative (including an authorized contractor acting as a representative of the Department or the administrator) to perform the following:
 - a. Enter the premises where a source required to obtain a permit is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
 - c. Inspect at reasonable times any facilities, emission units, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - d. As authorized by the Montana Clean Air Act and rules promulgated thereunder, sample or monitor, at reasonable times, any substances or parameters at any location for the purpose of assuring compliance with the permit or applicable requirements.
2. The permittee shall inform the inspector of all workplace safety rules or requirements at the time of inspection. This section shall not limit in any manner the Department's statutory right of entry and inspection as provided for in 75-2-403, MCA.

H. Fee Payment

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(f) and ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation, and Open Burning Fees §505(3)-(5) (STATE ONLY)

1. The permittee must pay application and operating fees, pursuant to ARM Title 17, Chapter 8, Subchapter 5.
2. Annually, the Department shall provide the permittee with written notice of the amount of the fee and the basis for the fee assessment. The air quality operation fee is due 30 days after receipt of the notice, unless the fee assessment is appealed pursuant to ARM 17.8.511. If any portion of the fee is not appealed, that portion of the fee that is not appealed is due 30 days after receipt of the notice. Any remaining fee, which may be due after the completion of an appeal, is due immediately upon issuance of the Board's decision or upon completion of any judicial review of the Board's decision.
3. If the permittee fails to pay the required fee (or any required portion of an appealed fee) within 90 days of the due date of the fee, the Department may impose an additional assessment of 15% of the fee (or any required portion of an appealed fee) or \$100, whichever is greater, plus interest on the fee (or any required portion of an appealed fee), computed at the interest rate established under 15-31-510(3), MCA.

I. Minor Permit Modifications

ARM 17.8, Subchapter 12, Operating Permit Program §1226(3)&(11)

1. An application for a minor permit modification need only address in detail those portions of the permit application that require revision, updating, supplementation, or deletion, and may reference any required information that has been previously submitted.

2. The permit shield under ARM 17.8.1214 will not extend to any minor modifications processed pursuant to ARM 17.8.1226.

J. Changes Not Requiring Permit Revision

ARM 17.8, Subchapter 12, Operating Permit Program §1224(1)-(3), (5)&(6)

1. The permittee is authorized to make changes within the facility as described below, provided the following conditions are met:
 - a. The proposed changes do not require the permittee to obtain a MAQP under ARM Title 17, Chapter 8, Subchapter 7;
 - b. The proposed changes are not modifications under Title I of the FCAA, or as defined in ARM Title 17, Chapter 8, Subchapters 8, 9, or 10;
 - c. The emissions resulting from the proposed changes do not exceed the emissions allowable under this permit, whether expressed as a rate of emissions or in total emissions;
 - d. The proposed changes do not alter permit terms that are necessary to enforce applicable emission limitations on emission units covered by the permit; and
 - e. The facility provides the administrator and the Department with written notification at least 7 days prior to making the proposed changes.
2. The permittee and the Department shall attach each notice provided pursuant to 1.e above to their respective copies of this permit.
3. Pursuant to the conditions above, the permittee is authorized to make Section 502(b)(10) changes, as defined in ARM 17.8.1201(30), without a permit revision. For each such change, the written notification required under 1.e above shall include a description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.
4. The permittee may make a change not specifically addressed or prohibited by the permit terms and conditions without requiring a permit revision, provided the following conditions are met:
 - a. Each proposed change does not weaken the enforceability of any existing permit conditions;
 - b. The Department has not objected to such change;
 - c. Each proposed change meets all applicable requirements and does not violate any existing permit term or condition; and
 - d. The permittee provides contemporaneous written notice to the Department and the administrator of each change that is above the level for insignificant emission units as defined in ARM 17.8.1201(22) and 17.8.1206(3), and the written notice describes each such change, including the date of the change, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
5. The permit shield authorized by ARM 17.8.1214 shall not apply to changes made pursuant to ARM 17.8.1224(3) and (5), but is applicable to terms and conditions that allow for increases and decreases in emissions pursuant to ARM 17.8.1224(4).

K. Significant Permit Modifications

ARM 17.8, Subchapter 12, Operating Permit Program §1227(1), (3)&(4)

1. The modification procedures set forth in 2 below must be used for any application requesting a significant modification of this permit. Significant modifications include the following:
 - a. Any permit modification that does not qualify as either a minor modification or as an administrative permit amendment;
 - b. Every significant change in existing permit monitoring terms or conditions;
 - c. Every relaxation of permit reporting or recordkeeping terms or conditions that limit the Department's ability to determine compliance with any applicable rule, consistent with the requirements of the rule; or
 - d. Any other change determined by the Department to be significant.
2. Significant modifications shall meet all requirements of ARM Title 17, Chapter 8, including those for applications, public participation, and review by affected states and the administrator, as they apply to permit issuance and renewal, except that an application for a significant permit modification need only address in detail those portions of the permit application that require revision, updating, supplementation or deletion.
3. The permit shield provided for in ARM 17.8.1214 shall extend to significant modifications.

L. Reopening for Cause

ARM 17.8, Subchapter 12, Operating Permit Program §1228(1)&(2)

This permit may be reopened and revised under the following circumstances:

1. Additional applicable requirements under the FCAA become applicable to the facility when the permit has a remaining term of 3 or more years. Reopening and revision of the permit shall be completed not later than 18 months after promulgation of the applicable requirement. No reopening is required under ARM 17.8.1228(1)(a) if the effective date of the applicable requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms or conditions have been extended pursuant to ARM 17.8.1220(12) or 17.8.1221(2);
2. Additional requirements (including excess emission requirements) become applicable to an affected source under the Acid Rain Program. Upon approval by the administrator, excess emission offset plans shall be deemed incorporated into the permit;
3. The Department or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit; or
4. The administrator or the Department determines that the permit must be revised or revoked and reissued to ensure compliance with the applicable requirements.

M. Permit Expiration and Renewal

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(g), §1220(11)&(12), and §1205(2)(d)

1. This permit is issued for a fixed term of 5 years.
2. Renewal of this permit is subject to the same procedural requirements that apply to permit issuance, including those for application, content, public participation, and affected state and administrator review.
3. Expiration of this permit terminates the permittee's right to operate unless a timely and administratively complete renewal application has been submitted consistent with ARM 17.8.1221 and 17.8.1205(2)(d). If a timely and administratively complete application has been submitted, all terms and conditions of the permit, including the application shield, remain in effect after the permit expires until the permit renewal has been issued or denied.
4. For renewal, the permittee shall submit a complete Air Quality Operating Permit application to the Department not later than 6 months prior to the expiration of this permit, unless otherwise specified. If necessary to ensure that the terms of the existing permit will not lapse before renewal, the Department may specify, in writing to the permittee, a longer time period for submission of the renewal application. Such written notification must be provided at least 1 year before the renewal application due date established in the existing permit.

N. Severability Clause

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(i)&(l)

1. The administrative appeal or subsequent judicial review of the issuance by the Department of an initial permit under this subchapter shall not impair in any manner the underlying applicability of all applicable requirements, and such requirements continue to apply as if a final permit decision had not been reached by the Department.
2. If any provision of a permit is found to be invalid, all valid parts that are severable from the invalid part remain in effect. If a provision of a permit is invalid in one or more of its applications, the provision remains in effect in all valid applications that are severable from the invalid applications.

O. Transfer or Assignment of Ownership

ARM 17.8, Subchapter 12, Operating Permit Program §1225(2)&(4)

1. If an administrative permit amendment involves a change in ownership or operational control, the applicant must include in its request to the Department a written agreement containing a specific date for the transfer of permit responsibility, coverage and liability between the current and new permittee.
2. The permit shield provided for in ARM17.8.1214 shall not extend to administrative permit amendments.

P. Emissions Trading, Marketable Permits, Economic Incentives

ARM 17.8, Subchapter 12, Operating Permit Program §1226(2)

Notwithstanding ARM 17.8.1226(1) and (7), minor air quality operating permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in the Montana State Implementation Plan or in applicable requirements promulgated by the administrator.

Q. No Property Rights Conveyed

ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(d)

This permit does not convey any property rights of any sort, or any exclusive privilege.

R. Testing Requirements

ARM 17.8, Subchapter 1, General Provisions §105

The permittee shall comply with ARM 17.8.105.

S. Source Testing Protocol

ARM 17.8, Subchapter 1, General Provisions §106

The permittee shall comply with ARM 17.8.106.

T. Malfunctions

ARM 17.8, Subchapter 1, General Provisions §110

The permittee shall comply with ARM 17.8.110.

U. Circumvention

ARM 17.8, Subchapter 1, General Provisions §111

The permittee shall comply with ARM 17.8.111.

V. Motor Vehicles

ARM 17.8, Subchapter 3, Emission Standards §325

The permittee shall comply with ARM 17.8.325.

W. Annual Emissions Inventory

ARM 17.8, Subchapter 5, Air Quality Permit Application, Operation and Open Burning Fees §505 (STATE ONLY)

The permittee shall supply the Department with annual production and other information for all emission units necessary to calculate actual or estimated actual amount of air pollutants emitted during each calendar year. Information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request, unless otherwise specified in this permit. Information shall be in the units required by the Department.

X. Open Burning

ARM 17.8, Subchapter 6, Open Burning §604, 605 and 606

The permittee shall comply with ARM 17.8.604, 605 and 606.

Y. Montana Air Quality Permits

ARM 17.8, Subchapter 7, Permit, Construction and Operation of Air Contaminant Sources §745 and 764

1. Except as specified, no person shall construct, install, modify or use any air contaminant source or stack associated with any source without first obtaining a permit from the Department or Board. A permit is not required for those sources or stacks as specified by ARM 17.8.744(1)(a)-(k).

2. The permittee shall comply with ARM 17.8.743, 744, 745, 748, and 764.
3. ARM 17.8.745(1) specifies de minimis changes as construction or changed conditions of operation at a facility holding a MAQP issued under Chapter 8 that does not increase the facility's potential to emit by more than 5 tons per year of any pollutant, except:
 - a. Any construction or changed condition that would violate any condition in the facility's existing MAQP or any applicable rule contained in Chapter 8 is prohibited, except as provided in ARM 17.8.745(2);
 - b. Any construction or changed conditions of operation that would qualify as a major modification under Subchapters 8, 9 or 10 of Chapter 8;
 - c. Any construction or changed condition of operation that would affect the plume rise or dispersion characteristic of emissions that would cause or contribute to a violation of an ambient air quality standard or ambient air increment as defined in ARM 17.8.804;
 - d. Any construction or improvement project with a PTE more than 5 tons per year may not be artificially split into smaller projects to avoid Montana Air Quality Permitting; or
 - e. Emission reductions obtained through offsetting within a facility are not included when determining the potential emission increase from construction or changed conditions of operation, unless such reductions are made federally enforceable.
4. Any facility making a de minimis change pursuant to ARM 17.8.745(1) shall notify the Department if the change would include a change in control equipment, stack height, stack diameter, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1).

Z. National Emission Standard for Asbestos
40 CFR 61, Subpart M

The permittee shall not conduct any asbestos abatement activities except in accordance with 40 CFR 61, Subpart M (National Emission Standard for Hazardous Air Pollutants for Asbestos).

AA. Asbestos

ARM 17.74, Subchapter 3, General Provisions and Subchapter 4, Fees

The permittee shall comply with ARM 17.74.301, *et seq.*, and ARM 17.74.401, *et seq.* (State only).

BB. Stratospheric Ozone Protection – Servicing of Motor Vehicle Air Conditioners
40 CFR 82, Subpart B

If the permittee performs a service on motor vehicles and this service involves ozone-depleting substance/refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR 82, Subpart B.

CC. Stratospheric Ozone Protection – Recycling and Emission Reductions
40 CFR 82, Subpart F

The permittee shall comply with the standards for recycling and emission reductions in 40 CFR 82, Subpart F, except as provided for MVACs in Subpart B.

1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
2. Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
3. Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technical certification program pursuant to §82.161.
4. Persons disposing of small appliances, MVACs and MVAC-like (as defined at §82.152) appliances must comply with recordkeeping requirements pursuant to §82.166.
5. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
6. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

DD. Emergency Episode Plan

The permittee shall comply with the requirements contained in Chapter 9.7 of the State of Montana Air Quality Control Implementation Plan.

Each major source emitting 100 tons per year located in a Priority I Air Quality Control Region, shall submit to the Department a legally enforceable Emergency Episode Action Plan (EEAP) that details how the source will curtail emissions during an air pollutant emergency episode. The industrial EEAP shall be in accordance with the Department's EEAP and shall be submitted according to a timetable developed by the Department, following Priority I reclassification.

EE. Definitions

Terms not otherwise defined in this permit or in the Definitions and Abbreviations Appendix of this permit, shall have the meaning assigned to them in the referenced regulations.

APPENDICES

APPENDIX A INSIGNIFICANT EMISSION UNITS

Disclaimer: The information in this appendix is not State or Federally enforceable, but is presented to assist Calumet, the permitting authority, inspectors, and the public.

Pursuant to ARM 17.8.1201(22)(a), an insignificant emission unit means any activity or emission unit located within a source that: (i) has a potential to emit (PTE) less than 5 tons per year of any regulated pollutant; (ii) has a PTE less than 500 lb/yr of lead; (iii) has a PTE less than 500 lb/yr of HAPs listed pursuant to Section 7412 (b) of the FCAA; and (iv) is not regulated by an applicable requirement, other than a generally applicable requirement that applies to all emission units subject to Subchapter 12.

List of Insignificant Activities:

The following table of insignificant sources and/or activities was provided by Calumet. Because there are no requirements to update such a list, the emission units and/or activities may change from those specified in the table.

Emissions Unit ID	Description	Associated Unit(s)
IEU02	3 Electric Compressors	HTU, Reformer, FCC
IEU10	Loadout Facilities Kerosene	Storage Loadout Unit
IEU11	Loadout Facilities Diesel (includes tanks 170 and 171)	Storage Loadout Unit
IEU12	Loadout Facilities Jet A	Storage Loadout Unit
IEU14	Loadout Facilities Standard Valves Heavy	Storage Loadout Unit
IEU15	Loadout Facilities JP-8	Storage Loadout Unit
IEU17	Loadout Facilities Fuel Oil #5	Storage Loadout Unit
IEU18	Loadout Facilities Crude	Storage Loadout Unit
IEU20	Drains	Crude Unit, Catalytic Poly Unit, FCCU, Catalytic Reformer Unit, Storage Loadout Unit, Utility Unit, Gasoline Loading Rack, PMA Unit, Cooling Tower, NaHS Unit
IEU21	Relief Valves	Utility Unit, Alkylation Unit, and Cooling Towers
IEU22	Open Valves	Utility Unit and Cooling Towers
IEU23	Flanges	Utility Unit, Alkylation Unit, and Cooling Towers
IEU24	Pumps Light Liquid Service (certain pumps such as LPG)	Catalytic Poly Unit, FCCU, and Storage Loadout Unit
IEU25	Storage Tanks Heavy (includes Tank 150)	Storage Loadout Unit
IEU26	Storage Valves Heavy	Crude Unit, Cat Poly Unit, Reformer Unit, Storage Loadout Unit, HTU Unit, Asphalt Polymerization Unit
IEU27	Pumps Heavy	Crude Unit, FCCU, and Storage Loadout Unit
IEU28	Chemical Additive Pots	Crude Unit, Cat Poly Unit, Cat Reformer Unit, Storage Loadout Unit, Utility Unit, Asphalt Polymerization Unit
IEU29	Fuel Gas Open Valves	Utility Unit
IEU30	Fuel Gas Flanges	Utility Unit
IEU31	Fuels Gas Relief Valves	Utility Unit
IEU32	Flare Pilot Gas	Utility Unit
IEU33	Standard Valves Gas	Utility Unit, Alkylation Unit, PMA Unit, Cooling Towers
IEU34	Lubricator	Cat Reformer Unit, HTU Unit

IEU35	Standard Valves Light (certain valves such as LPG)	Catalytic Poly Unit, FCCU, Storage Loadout Unit, Alkylation Unit
IEU36	Standard Valves Hydrogen	FCCU, Cat Reformer Unit HTU Unit Hydrogen Unit
IEU37	Compressor Hydrogen	Cat Reformer Unit, HTU Unit
IEU38	Chemical Additive Tanks	Hydrogen Unit
IEU39	Ethanol Tank 176	Truck Loading Rack

APPENDIX B DEFINITIONS and ABBREVIATIONS

"Act" means the Clean Air Act, as amended, 42 U.S. 7401, *et seq.*

"Administrative permit amendment" means an air quality operating permit revision that:

- (a) Corrects typographical errors;
- (b) Identifies a change in the name, address or phone number of any person identified in the air quality operating permit, or identifies a similar minor administrative change at the source;
- (c) Requires more frequent monitoring or reporting by Calumet;
- (d) Requires changes in monitoring or reporting requirements that the Department deems to be no less stringent than current monitoring or reporting requirements;
- (e) Allows for a change in ownership or operational control of a source if the Department has determined that no other change in the air quality operating permit is necessary, consistent with ARM 17.8.1225; or
- (f) Incorporates any other type of change that the Department has determined to be similar to those revisions set forth in (a)-(e), above.

"Applicable requirement" means all of the following as they apply to emission units in a source requiring an air quality operating permit (including requirements that have been promulgated or approved by the Department or the administrator through rule making at the time of issuance of the air quality operating permit, but have future-effective compliance dates, provided that such requirements apply to sources covered under the operating permit):

- (a) Any standard, rule, or other requirement, including any requirement contained in a consent decree or judicial or administrative order entered into or issued by the Department, that is contained in the Montana State Implementation Plan approved or promulgated by the administrator through rule making under Title I of the FCAA;
- (b) Any federally enforceable term, condition or other requirement of any Montana Air Quality Permit issued by the Department under Subchapters 7, 8, 9 and 10 of this chapter, or pursuant to regulations approved or promulgated through rule making under Title I of the FCAA, including Parts C and D;
- (c) Any standard or other requirement under Section 7411 of the FCAA, including Section 7411(d);
- (d) Any standard or other requirement under Section 7412 of the FCAA, including any requirement concerning accident prevention under Section 7412(r)(7), but excluding the contents of any risk management plan required under Section 7412(r);
- (e) Any standard or other requirement of the acid rain program under Title IV of the FCAA or regulations promulgated thereunder;
- (f) Any requirements established pursuant to Section 7661c(b) or Section 7414(a)(3) of the FCAA;

- (g) Any standard or other requirement governing solid waste incineration, under Section 7429 of the FCAA;
- (h) Any standard or other requirement for consumer and commercial products, under Section 7511b(e) of the FCAA;
- (i) Any standard or other requirement for tank vessels, under Section 7511b(f) of the FCAA;
- (j) Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the FCAA, unless the administrator determines that such requirements need not be contained in an air quality operating permit;
- (k) Any national ambient air quality standard or increment or visibility requirement under part C of Title I of the FCAA, but only as it would apply to temporary sources permitted pursuant to Section 7661c(e) of the FCAA; or
- (l) Any federally enforceable term or condition of any air quality open burning permit issued by the Department under Subchapter 6.

"Department" means the Montana Department of Environmental Quality.

"Emissions unit" means any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant or any pollutant listed under Section 7412(b) of the FCAA. This term is not meant to alter or affect the definition of the term "unit" for purposes of Title IV of the FCAA.

"Excess Emissions" means any visible emissions from a stack or source, viewed during the visual surveys, that meets or exceeds 15% opacity (or 30% opacity if associated with a 40% opacity limit) during normal operating conditions.

"FCAA" means the Federal Clean Air Act, as amended.

"Federally enforceable" means all limitations and conditions which are enforceable by the administrator, including those requirements developed pursuant to 40 CFR Parts 60 and 61, requirements within the Montana State Implementation Plan, and any permit requirement established pursuant to 40 CFR Part 52.21 or under regulations approved pursuant to 40 CFR Part 51, Subpart I, including operating permits issued under an Environmental Protection Agency approved program that is incorporated into the Montana State Implementation Plan and expressly requires adherence to any permit issued under such program.

"Fugitive emissions" means those emissions, which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

"General air quality operating permit" or **"general permit"** means an air quality operating permit that meets the requirements of ARM 17.8.1222, covers multiple sources in a source category, and is issued in lieu of individual permits being issued to each source.

"Hazardous air pollutant" means any air pollutant listed as a hazardous air pollutant pursuant to Section 112(b) of the FCAA.

"Non-federally enforceable requirement" means the following as they apply to emission units in a source requiring an air quality operating permit:

- (a) Any standard, rule, or other requirement, including any requirement contained in a consent decree, or judicial or administrative order entered into or issued by the Department, that is not contained in the Montana State Implementation Plan approved or promulgated by the administrator through rule making under Title I of the FCAA;
- (b) Any term, condition or other requirement contained in any MAQP issued by the Department under Subchapters 7, 8, 9 and 10 of this chapter that is not federally enforceable;
- (c) Does not include any Montana ambient air quality standard contained in Subchapter 2 of this chapter.

"Permittee" means the owner or operator of any source subject to the permitting requirements of this subchapter, as provided in ARM 17.8.1204, that holds a valid air quality operating permit or has submitted a timely and complete permit application for issuance, renewal, amendment, or modification pursuant to this subchapter.

"Regulated air pollutant" means the following:

- (a) Nitrogen oxides or any volatile organic compounds;
- (b) Any pollutant for which a national ambient air quality standard has been promulgated;
- (c) Any pollutant that is subject to any standard promulgated under Section 7411 of the FCAA;
- (d) Any Class I or II substance subject to a standard promulgated under or established by Title VI of the FCAA; or
- (e) Any pollutant subject to a standard or other requirement established or promulgated under Section 7412 of the FCAA, including but not limited to the following:
 - (i) Any pollutant subject to requirements under Section 7412(j) of the FCAA. If the administrator fails to promulgate a standard by the date established in Section 7412(e) of the FCAA, any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established in Section 7412(e) of the FCAA;
 - (ii) Any pollutant for which the requirements of Section 7412(g)(2) of the FCAA have been met but only with respect to the individual source subject to Section 7412(g)(2) requirement.

"Responsible official" means one of the following:

- (a) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 - (i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or

- (ii) The delegation of authority to such representative is approved in advance by the Department.
- (b) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.
- (c) For a municipality, state, federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a regional administrator of the environmental protection agency).
- (d) For affected sources: the designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the FCAA or the regulations promulgated thereunder are concerned, and the designated representative for any other purposes under this subchapter.

Abbreviations:

ARM	Administrative Rules of Montana
ASTM	American Society of Testing Materials
BACT	Best Available Control Technology
Btu	British thermal unit
CEMS	Continuous Emissions Monitoring System
COMS	Continuous Opacity Monitoring System
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic foot
dscfm	dry standard cubic foot per minute
EEAP	Emergency Episode Action Plan
EPA	U.S. Environmental Protection Agency
EPA Method	Test methods contained in 40 CFR 60, Appendix A
EU	emissions unit
FCAA	Federal Clean Air Act
FCCU	Fluid Catalytic Cracking Unit
gr	grains
HAP	hazardous air pollutant
IEU	insignificant emissions unit
Method 5	40 CFR 60, Appendix A, Method 5
Method 9	40 CFR 60, Appendix A, Method 9
MMbdf	million board feet
MMBtu	million British thermal units
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NSPS	New Source Performance Standard
NO _x	oxides of nitrogen
NO ₂	nitrogen dioxide
O ₂	oxygen
Pb	lead
PM	particulate matter
PM ₁₀	particulate matter less than 10 microns in size
PMA	Polymer Modified Asphalt
psi	pounds per square inch
RATA	Relative Accuracy Test Audit
scf	standard cubic feet
SIC	Source Industrial Classification
SO ₂	sulfur dioxide
SO _x	oxides of sulfur
SWSOH	Sour water stripper overheads
TPD	tons per day
TPY	tons per year
U.S.C.	United States Code
VE	visible emissions
VOC	volatile organic compound

Compliance Notifications:

Montana Department of Environmental Quality
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901
Helena, MT 59620-0901

United States EPA
Air Program Coordinator
Region VIII, Montana Office
10 W. 15th Street, Suite 3200
Helena, MT 59626

Permit Modifications:

Montana Department of Environmental Quality
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901
Helena, MT 59620-0901

Office of Partnerships and Regulatory Assistance
Air and Radiation Program
US EPA Region VIII 8P-AR
1595 Wynkoop Street
Denver, CO 80202-1129

APPENDIX D AIR QUALITY INSPECTOR INFORMATION

Disclaimer: The information in this appendix is not State or Federally enforceable, but is presented to assist Calumet, permitting authority, inspectors, and the public.

Direction to Plant: Calumet is located at 1900 10th Street Northeast along the Missouri River in the city of Great Falls, Montana.

Safety Equipment Required: Hardhat, steel-toed shoes/boots, and hearing protection (ear plugs will be provided by Calumet) are required at the facility. A detailed safety manual is available at the site, and a Calumet employee will conduct a safety briefing for any inspector prior to entering the plant area.

Facility Plot Plan: The facility plot plan was submitted as part of the application on May 17, 1995, and an update submitted with the renewal application on June 5, 2006.

APPENDIX E AMBIENT AIR MONITORING PLAN

1. This Ambient Air Monitoring Plan applies to Calumet’s crude oil refinery located at 1900 10th Street, in Great Falls, Montana. The Department may modify the requirements of this monitoring plan. All requirements of this plan are considered conditions of the permit.
2. The requirements of this attachment shall take effect within 30 days of permit issuance, unless otherwise approved in writing by the Department.
3. Calumet shall operate and maintain one air monitoring site northeast of the refinery. The exact location of the monitoring site must be approved by the Department and meet all the siting requirements contained in the Montana Quality Assurance Manual, including revisions, the EPA Quality Assurance Manual, including revisions, and 40 Code of Federal Regulations (CFR) Part 58, or any other requirements specified by the Department.
4. Calumet shall submit a topographic map to the Department identifying UTM coordinates, air monitoring site locations in relation to the facility, and the general area present.
5. Within 30 days prior to any changes of the location of the ambient monitors, Calumet shall submit a topographic map to the Department identifying UTM coordinates, air monitoring site locations in relation to the facility, and the general area present.
6. Calumet shall continue air monitoring for at least 2 years after installation of the monitor described in Section 2 above. The Department will review the air monitoring data and the Department will determine if continued monitoring or additional monitoring is warranted. The Department may require continued air monitoring to track long-term impacts of emissions from the facility or require additional ambient air monitoring or analyses if any changes take place in regard to quality and/or quantity of emissions or the area of impact from the emissions.
7. Calumet shall monitor the following parameters at the site and frequencies described below:

AIRS # 30-013-2001	Site Name – Race Track Site	
<u>UTM Coordinates</u>	<u>Code & Parameter</u>	<u>Frequency</u>
Zone 12	42401 SO ₂ ¹	Continuous
N 5263700	61101 Wind Speed and Direction	"
E 478600	61106 Standard Deviation of Wind Direction (sigma theta)	"

¹SO₂= sulfur dioxide

8. Data recovery for all parameters shall be at least 80% computed on a quarterly and annual basis. The Department may require continued monitoring if this condition is not met. (Data recovery = (Number of data points collected in evaluation period)/(number of scheduled data points in evaluation period)*(100%)).
9. Any ambient air monitoring changes proposed by Calumet must be approved, in writing, by the Department.

10. Calumet shall utilize air monitoring and Quality Assurance (QA) procedures that are equal to or exceed the requirements described in the Montana Quality Assurance Manual, including revisions, the EPA Quality Assurance Manual, including revisions, 40 CFR Parts 50 and 58 of the Code of Federal Regulations, and any other requirements specified by the Department.
11. Calumet shall submit two hard copies of quarterly data reports within 45 days after the end of the calendar quarter and two hard copies of the annual data report within 90 days after the end of the calendar year.
12. The quarterly data submittals shall consist of a hard copy narrative data summary and a digital submittal of all data points in AIRS batch code format. The electronic data must be submitted to the Air Monitoring Section as digital text files readable by an office personal computer (PC) with a Windows operating system.

The narrative data hard copy summary must be submitted to the Air Compliance Section and shall include:

- a. A hard copy of the individual data points,
 - b. The first and second highest 24-hour rolling and block concentrations for SO₂,
 - c. The first and second highest 3-hour concentrations for SO₂,
 - d. The first and second highest hourly concentrations for SO₂,
 - e. The quarterly and monthly wind roses,
 - f. A summary of data completeness,
 - g. A summary of the reasons for missing data,
 - h. A precision data summary,
 - i. A summary of any ambient air standard exceedances, and
 - j. Quality Assurance/Quality Control (QA/QC) information such as zero/span/precision, calibration, audit forms, and standards certifications.
13. The annual data report shall consist of a narrative data summary. The narrative data hard copy summary must be submitted to the Air Compliance Section and shall include:
 - a. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site location in relation to the refinery and the general area,
 - b. The annual average concentration for SO₂;
 - c. The year's four highest 24-hour rolling and block concentrations for SO₂,
 - d. The year's four highest 3-hour concentrations for SO₂,
 - e. The year's four highest hourly SO₂ concentrations,
 - f. The annual wind rose,

- g. A summary of any ambient air standard exceedances, and
 - h. An annual summary of data completeness.
14. All records compiled in accordance with this Attachment must be maintained by Calumet as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
 15. The Department may audit (or may require Calumet to contract with an independent firm to audit) the air monitoring network, the laboratory performing associated analyses, and any data handling procedures at unspecified times.
 16. The hard copy reports should be sent to:
 - Department of Environmental Quality
 - Attention: Air Compliance Section Supervisor
 17. The electronic data from the quarterly monitoring shall be sent to:
 - Department of Environmental Quality
 - Attention: Air Monitoring Section Supervisor

The Department requested that Calumet submit a Compliance Assurance Monitoring (CAM) Plan for applicable units and Calumet submitted the requested information on September 5, 2013. It was determined that none of the emitting units at the facility are subject to CAM.