



October 2, 2015

Raymond Rigdon  
Phillips 66 Company-Billings Refinery  
PO Box 30198  
401 South 23<sup>rd</sup> Street  
Billings, MT 59107-0198

RE: Administrative Amendment Title V Operating Permit #OP2619-09

Dear Mr. Rigdon:

The Department of Environmental Quality has prepared the enclosed Final Operating Permit #OP2619-09, for Phillips 66 Company- Billings Refinery, located in the NW ¼ Section 2, Township 1 South, Range 26 East, Yellowstone Country. Please review the cover page of the attached permit for information pertaining to the action taking place on Permit #OP2619-09.

If you have any questions, please contact Loni Patterson, the permit writer, at (406) 444-1452 or by email at [lpatterson@mt.gov](mailto:lpatterson@mt.gov).

Sincerely,

A handwritten signature in black ink that reads "Julie A. Merkel".

Julie Merkel  
Permitting Services Section Supervisor  
Air Quality Bureau  
(406) 444-3626

A handwritten signature in black ink that reads "Loni Patterson".

Loni Patterson  
Environmental Engineer  
Air Quality Bureau  
(406) 444-1452

JM: LP

Enclosure

cc: Robert Duraski, US EPA Region VIII 8P-AR  
Robert Gallagher, USA EPA Region 8 – Montana Operations

STATE OF MONTANA  
Department of Environmental Quality  
Helena, Montana 59620



## AIR QUALITY OPERATING PERMIT OP2619-09

Issued to: **Phillips 66 Company**  
**PO Box 30198**  
**401 South 23<sup>rd</sup> Street**  
**Billings, MT 59107-0198**

Final Date: October 2, 2015  
Expiration Date: June 13, 2019  
Renewal Application Due: December 13, 2018

Effective Date: October 2, 2015  
Date of Decision: September 1, 2015

Administrative Amendment Received: August 10, 2015  
Application Deemed Administratively Complete: August 10, 2015  
Application Deemed Technically Complete: August 10, 2015  
AFS Number: 030-111-0011A

**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 10/2/2015. 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:** Phillips 66 Company, Billings Refinery

**Mailing Address:** P.O. Box 30198, 401 South 23<sup>rd</sup> Street

**City:** Billings

**State:** Montana

**Zip:** 59107-0198

**Plant Location:** NW ¼ Section 2, Township 1 South, Range 26 East, Yellowstone Country

**Responsible Official:** Raymond W. Rigdon

**Phone:** (406) 255-2551

**Email:** [raymond.w.rigdon@p66.com](mailto:raymond.w.rigdon@p66.com)

**Alternate Responsible Official:** Madeleine P. Chernesky

**Phone:** (406) 255-2476

**Email:** [madeleine.p.chernesky@p66.com](mailto:madeleine.p.chernesky@p66.com)

**Facility Contact Person:** Steve Torpey

**Phone:** (406) 255-2580

**Email:** [steve.torpey@p66.com](mailto:steve.torpey@p66.com)

**Primary SIC Code:** 2911

**Nature of Business:** Petroleum Refining

**Description of Process:** 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 product.

The Phillips 66 Billings Refinery also includes the Jupiter Sulfur Recovery Facility. The recovery facility utilizes sulfur from the refining process to produce fertilizer.

The Phillips 66 Pipeline Company's Billings Transportation Operations (Phillips 66) is a support facility for the Phillips 66 Billings Refinery. As such, it is included in conjunction with the refinery for Prevention of Significant Deterioration (PSD), Maximum Achievable Control Technology (MACT), and other permitting determinations.

The transportation operations were previously permitted as part of the refinery's Title V Operating Permit #OP2619-01, and is still contained as part of the most recent Montana Air Quality Permit (MAQP) #2619-30. However, since there are separate management structures, the facility requested to separate the transportation operations from the refinery in a separate operating permit, which was assigned Operating Permit #OP4056.

## SECTION II. SUMMARY OF EMISSIONS UNITS

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

Emissions Unit ID	Description	Pollution Control Device/Practice
EU001	<b>Boilers:</b> Main Boiler House Stack: Boilers B-1, B-2, B-5, and B-6, and Temporary Boiler.	None
EU002	<b>FCCU:</b> FCCU Regenerator	None/ GOHDS Outage Plan
EU003	<b>Fuel Gas Combustion Units:</b> H-1, H-2, H-4, H-5, H-10, H-11, H-12, H-13, H-14, H-15, H-16, H-17, H-18, H-19, H-20, H-21, H-23, H-24, H-3901, H-8401, H-8402, H-9401, 9501, 9502, and 9701.	None/ 40 CFR 60, Subpart J
EU004	<b>PMA Process Unit:</b> PMA Process Heater (H-3201)	None
EU005	<b>Refinery Flare (Refinery Main Plant Relief Flare)</b> - Emergency Flare	Flare is control equipment
EU006	<b>Refinery Fugitive Emissions</b> <ul style="list-style-type: none"> <li>- Cryogenic Unit,</li> <li>- C-23 Compressor Station,</li> <li>- C-3901 Coker Unit Wet Gas Compressor</li> <li>- C-5301 Flare Gas Recovery Unit Liquid Ring Compressor</li> <li>- C-5302 Flare Gas Recovery Unit Liquid Ring Compressor</li> <li>- C-8301 Cryo Unit Inlet Gas Compressor</li> <li>- C-8302 Cryo Unit Refrigerant Compressor</li> <li>- C-8303 Cryo Unit Regeneration Gas Compressor</li> <li>- C-8401 No. 4 HDS Makeup/Recycle Hydrogen Compressor</li> <li>- C-7401 Hydrogen Makeup/Reformer Hydrogen Compressor</li> <li>- C-9401 Hydrogen Plant Feed Gas Compressor</li> <li>- C-9501 Makeup/Recycle Gas Compressor</li> <li>- C-9701 Feed Gas Compressor</li> <li>- C-8402 Makeup/Recycle Hydrogen Compressor</li> <li>- Hydrogen Membrane Unit,</li> <li>- Gasoline Merox Unit,</li> <li>- Hydrogen Plant Feed System,</li> <li>- Alkylation Unit Butane Defluorinator Project,</li> <li>- PMA Process Unit,</li> <li>- Depropanizer Project,</li> <li>- Crude Topping Units,</li> <li>- Crude Vacuum Unit,</li> <li>- Fluidized Catalytic Cracking Unit,</li> <li>- Catalytic Reforming Units #1 &amp; #2,</li> <li>- Alkylation Unit,</li> <li>- Hydrodesulfurization Units #1 &amp; #2,</li> <li>- Gas Oil Hydrotreating Unit,</li> <li>- Delayed Coking Unit,</li> <li>- Upgrading, Treating, and Recovery Units,</li> <li>- Cryo Debutanizer Unit,</li> <li>- Butamer/Feed Prep Unit,</li> </ul>	None

	<ul style="list-style-type: none"> <li>- Gas Recovery Plant Unit,</li> <li>- Naphtha Splitter Unit,</li> <li>- Sat Gas Plant Unit,</li> <li>- Hydrogen Purification Unit,</li> <li>- Railroad Loading Rack,</li> <li>- Cooling Towers, and</li> <li>- Tank Farm.</li> </ul>	
EU007	<p><b>Sulfur Recovery Facility</b></p> <ul style="list-style-type: none"> <li>- Ammonium Thiosulfate (ATS) Unit,</li> <li>- Ammonium Sulfide Unit,</li> <li>- Sulfur Recovery Unit (SRU), and</li> <li>- Jupiter SRU Flare.</li> </ul>	Flare and Incinerators/ CAM Plan
EU008	<p><b>Storage Tanks (non-wastewater)</b>  <i>(see Transportation Operations #OP4056-00 for additional tankage)</i></p> <p>Refinery MACT 1 Group 1:</p> <ul style="list-style-type: none"> <li>- Crude Oil Storage Tanks #1, #2, and #1102;</li> <li>- Gasoline, Naphtha, and Other Storage Tanks: #3, #5, #7, #9, #12, #16, #21, #41, #42, #45, #46, #49, #52, #55, #72, #75, #80, #86, #87, #102, #110, #851, #2909</li> </ul> <p>Refinery MACT 1 Group 2:</p> <ul style="list-style-type: none"> <li>- Asphalt and PMA Storage Tanks #4, #62, #100, #101 &amp; #3201</li> <li>- Jet A, Distillate, and Diesel Storage Tanks #8, #10, #14, #20, #33, #47, #48, #53, #54, #57, #74,</li> <li>- Residual and Fuel Oil Storage Tanks #6, #17, #39, #40, #69, #70, #81, #107</li> <li>- Other Storage Tanks #11, #13, #18, #32, #59, #60, #82, #88, #91, #92, #116, #801</li> </ul> <p>Organic Liquid Distribution MACT:</p> <ul style="list-style-type: none"> <li>- Proto Gas Tanks #2901 - #2907</li> <li>- Dye &amp; Other Tanks #78, #79 &amp; #109</li> </ul> <p>Other</p> <ul style="list-style-type: none"> <li>- Propane Tanks</li> </ul>	None, Primary and Possibly Secondary Seals on Floating Roofs
EU010	<p><b>Wastewater Treatment</b></p> <p>Wastewater Tanks:</p> <ul style="list-style-type: none"> <li>- #15 – Sour Water</li> <li>- #34, #35 &amp; #164 – Slop Oil</li> <li>- #4523 - WW Surge</li> </ul> <p>Wastewater Separators:</p> <ul style="list-style-type: none"> <li>- #163 – Primary Separator</li> <li>- #169 &amp; #170 – Secondary Separators (CPI)</li> <li>- #4510 &amp; #4511 – Desalter Break</li> <li>- #4512 &amp; #4513 – Coker Break</li> </ul> <p>Oily Water Sewer Drain Systems:</p> <ul style="list-style-type: none"> <li>- Coker Unit,</li> <li>- Gas Oil Hydrotreater,</li> <li>- No.1 Hydrogen Unit (20.0 MMscfd),</li> <li>- No.2 Hydrogen Unit,</li> <li>- No.5 HDS Unit,</li> <li>- C-23 Compressor Station,</li> </ul>	None, Carbon Canisters

	<ul style="list-style-type: none"> <li>- Alkylation Unit Butane Defluorinator Project,</li> <li>- Alkylation Unit Depropanizer Project,</li> <li>- #3 Sour Water Stripper,</li> <li>- South Tank Farm, and</li> <li>- Associated Wastewater Tanks.</li> </ul>	
EU011	<b>Miscellaneous Process Vents</b>	None
EU012	<b>Catalytic Reforming Units 1 &amp; 2</b>	None
EU013	Backup Coke Crusher	None
EU014	Reciprocating Internal Combustion Engines <ul style="list-style-type: none"> <li>- Backup Coke Crusher Engine</li> <li>- Cryo Backup Air Compressor Engine</li> <li>- Boiler House Air Compressor Engine</li> <li>- Storm Water to Holding Pond Pump Engine</li> <li>- Boiler House Backup Air Compressor</li> </ul>	None

### SECTION III. PERMIT CONDITIONS

The following requirements and conditions are applicable to the facility or to specific emissions 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	Particulate Matter, Airborne	Reasonable Precaution, Construction	20%
A.9	ARM 17.8.309	Particulate Matter, Fuel Burning Equipment	Particulate Matter	E= 0.882 * H <sup>-0.1664</sup> or E= 1.026 * H <sup>-0.233</sup>
A.10	ARM 17.8.310	Particulate Matter, Industrial Processes	Particulate Matter	E= 4.10 * P <sup>0.67</sup> or E= 55 * P <sup>0.11- 40</sup>
A.11	ARM 17.8.322(4) and 1979 State Implementation Plan (SIP)	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(3)	Hydrocarbon Emissions, Petroleum Products	Gasoline Storage Tanks	-----
A.14	ARM 17.8.324	Hydrocarbon Emissions, Petroleum Products	65,000-Gallon Capacity	-----
A.15	ARM 17.8.324(2)	Hydrocarbon Emissions, Petroleum Products	Oil-effluent Water Separator	-----
A.16	ARM 17.8.325	Motor Vehicles	Air Pollution Control Devices	-----
A.17	ARM 17.8.615	Firefighting Training Permit	Firefighting Requirements	-----
A.18, A.19	ARM 17.74.336; 40 CFR 61, Subpart M	Asbestos	Asbestos	-----
A.20	ARM 17.8.341	National Emission Standards for Hazardous Air Pollutants (NESHAPs)	All Applicable Provisions of 40 CFR 61, Subpart FF	-----
A.21	ARM 17.8.342	NESHAPs - 40 CFR 63 General Provisions	Start-up, Shutdown, Malfunction (SSM) Plans	Submittal
A.22	40 CFR 68	Chemical Accident Prevention	Risk Management Plan	-----
A.23	ARM 17.8.749	Operating Requirements	All systems totally enclosed	-----
A.24	ARM 17.8.749	Permit Conditions	SO <sub>2</sub>	3103 ton/yr

Conditions	Rule Citation	Rule Description	Pollutant/Parameter	Limit
A.25	ARM 17.8.1212	Recordkeeping Requirements	SO <sub>2</sub>	-----
A.26	40 CFR 51	SIP	SO <sub>2</sub>	-----
A.27	40 CFR 51	SIP – State Only	SO <sub>2</sub>	-----
A.28	40 CFR 51	SIP	Sulfur Bearing Gases	-----
A.29	40 CFR 51	SIP	Quantify Emissions	-----
A.30	ARM 17.8.1212	Maintain Records	5 Years	-----
A.31	ARM 17.8.1212	Notification and Reporting	Various	As specified
A.32	ARM 17.8.749 & 17.8.801(7)	Refinery and Terminal	One Source for New Source Review and MACT Purposes	-----
A.33	ARM 17.8.1211(1)(c) and 40 CFR Part 98	Greenhouse Gas Reporting	Reporting	-----
A.34	ARM 17.8.1212	Reporting Requirements	Prompt Deviation Reporting	-----
A.35	ARM 17.8.1212	Reporting Requirements	Compliance Monitoring	-----
A.36	ARM 17.8.1207	Reporting Requirements	Annual Certification	-----
A.37	ARM 17.8.505	Reporting Requirements	Annual Production Information	-----

## 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), Phillips 66 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), Phillips 66 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), Phillips 66 shall not cause or authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control emissions of particulate matter are taken. Such emissions of airborne particulate matter 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), Phillips 66 shall not cause or authorize the use of any street, road or parking lot without taking reasonable precautions to control emissions of airborne particulate matter, unless otherwise specified by rule or in this permit.
- A.8. Pursuant to ARM 17.8.308(3), Phillips 66 shall not operate a construction site or demolition project unless reasonable precautions are taken to control emissions of airborne particulate matter. Such emissions of airborne particulate matter 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, Phillips 66 shall not cause or authorize particulate matter 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 particulate matter 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. When two or more fuel-burning units are connected to a single stack, the combined heat input of all units connected to the stack shall not exceed that allowable for the same unit connected to a single stack. 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.10. Pursuant to ARM 17.8.310, unless otherwise specified by rule or in this permit, Phillips 66 shall not cause or authorize particulate matter to be discharged from any operation, process, or activity into the outdoor atmosphere in excess of the maximum hourly allowable emissions of particulate matter, calculated using the following equations:

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

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

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), Phillips 66 shall not burn liquid or solid fuels containing sulfur in excess of 1 pound per million BTU 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 million BTU fired. The rule shall be interpreted to allow for a daily deviation of 0.1 pound of sulfur per million BTU 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 State Implementation Plan (SIP), September 1979).
- A.12. Pursuant to ARM 17.8.322(5), Phillips 66 shall not burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet 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 one pound of sulfur per million BTU fired. The rule shall be interpreted to allow for a daily deviation of 0.1 pound of sulfur per million BTU 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(3), Phillips 66 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), unless otherwise specified by rule or in this permit.
- A.14. Pursuant to ARM 17.8.324, unless otherwise specified by rule or in this permit, Phillips 66 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.15. Pursuant to ARM 17.8.324(2), unless otherwise specified by rule or in this permit, Phillips 66 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.16. Phillips 66 shall comply with ARM 17.8.325. Phillips 66 may monitor and certify compliance with ARM 17.8.325 by initially surveying its Phillips 66-owned on-road vehicles for the proper pollution control equipment. The survey shall be kept updated with the addition of any newly obtained Phillips 66-owned on-road vehicles. Phillips 66 shall also revise its on-road vehicle maintenance procedure to state that on-road vehicle pollution control equipment removed for maintenance must be repaired and reinstalled or replaced.
- A.17. Phillips 66 shall maintain records that they have applied for and, if issued, complied with any required Firefighter Training permit to conduct open burning for fire training purposes (ARM 17.8.615).
- A.18. Pursuant to ARM 17.74.336, Phillips 66 shall comply with all the limitations and requirements of their Asbestos Abatement Annual Permit #MTF06-0010, or its updates.
- A.19. Phillips 66 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, as appropriate, of 40 CFR 61, Subpart M Asbestos.
- A.20. Phillips 66 shall manage and treat the facility waste, including each process wastewater stream that meets the definition in 40 CFR 61.341, in accordance with the applicable requirements of 40 CFR 61.342(e) (Subpart FF "BQ6" Alternative). Phillips 66 shall comply with applicable testing, monitoring and inspection, recordkeeping and reporting requirements set out under 40 CFR 61, Subpart FF (ARM 17.8.341).
- A.21. Pursuant to ARM 17.8.342 and 40 CFR 63.6, Phillips 66 shall submit to the Department a copy of any startup, shutdown, and malfunction (SSM) plan required under 40 CFR 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 National Emission Standard for Hazardous Air Pollutants (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.22. A Risk Management Plan, developed in accordance with 40 CFR 68, shall be registered with the United States Environmental Protection Agency by June 21, 1999. Phillips 66 shall submit a certification statement to the Department that states Phillips 66 is in compliance with the requirements of 40 CFR 68, including registration and updates of their Risk Management Plan pursuant to §112(r) of the FCAA (40 CFR 68.150, 160, and 190).

- A.23. All systems within the Phillips 66 refinery and Jupiter sulfur recovery facility (modifications) shall be totally enclosed and controlled such that any pollutant generated does not vent to atmosphere, except as expressly allowed in this permit (ARM 17.8.749 and ARM 17.8.1211).
- A.24. Unless otherwise specified by rule or in this permit, Phillips 66 shall not cause or authorize total sulfur dioxide (SO<sub>2</sub>) emissions from refinery and sulfur recovery facilities to exceed the limit of 3,103 ton/yr. In addition, where applicable, all other federal emission limitations shall be met (ARM 17.8.749 and ARM 17.8.1211).
- A.25. Phillips 66 shall maintain, under Phillips 66's control, records of total SO<sub>2</sub> emissions from the refinery and sulfur recovery facilities. This record shall be used to monitor compliance with the limitation as specified in Section III.A.24 (ARM 17.8.1212).
- A.26. Pursuant to the June 12, 1998, Board Order adopting a SO<sub>2</sub> control plan (Appendix E of this permit), Phillips 66 shall comply with all requirements of Exhibit A and Attachment 1 of the plan. In addition, Phillips 66 shall comply with all terms as set forth by this permit (Board Order signed on June 12, 1998, the control plan was partially approved/partially disapproved by EPA on May 2, 2002; parts of the requirement that were disapproved remain "State Only" along with those provisions intended to be "State Only" that were not submitted to EPA).
- A.27. Pursuant to the June 12, 1998, Board Order adopting a SO<sub>2</sub> control plan (Appendix E of this permit), Phillips 66 shall comply with all requirements of Exhibit A-1 and corresponding attachments (Board Order signed on June 12, 1998, this requirement is "State Only").
- A.28. Phillips 66 shall utilize appropriate maintenance, repair, and operating practices to control emissions of sulfur bearing gases from minor sources such as ducts, stacks, valves, vents, vessels, and flanges that are not otherwise subject to the Stipulation and Exhibit A (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- A.29. Phillips 66 shall use good engineering judgment and appropriate engineering calculations to quantify emissions from activities that are not otherwise addressed by the Stipulation and Exhibit A, but are known to contribute to emissions from sources listed in Exhibit A, Section 1(B). In addition, Phillips 66 shall account for such emissions in determining compliance with all applicable emission limits contained in Exhibit A, Section 3 (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- A.30. Phillips 66 shall maintain, under Phillips 66'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).
- A.31. Phillips 66 shall keep the Department apprised of the status of construction, dates of performance tests, and continuous compliance status for each emission point and pollutant. Specifically, the following report and recordkeeping shall be submitted in writing (ARM 17.8.749 and 17.8.1212):
- a. Notification of date of construction commencement, cessation of construction, restarts of construction, startups, initial emission tests, monitor certification tests, etc.

- b. Submittal for review by the Department of the emissions testing plan, results of initial compliance tests, continuous emission monitor certification tests, continuous emission monitoring and continuous emissions rate monitoring quality assurance/quality control plans, and excess emissions report within the 180-day shakedown period.
  - c. Copies of emissions reports, excess emissions, and all other such items shall be submitted to both the appropriate Regional Office from which the Compliance Officer is based from, and the Helena office of the Department.
  - d. Monitoring data shall be maintained for a minimum of 5 years at the Phillips 66 Refinery and Jupiter sulfur recovery facilities.
  - e. All data and records that are required to be maintained must be made available upon request by representatives of the EPA.
- A.32. Phillips 66 Company, Billings Refinery (including the Jupiter Sulphur plant) and the Phillips 66 Pipe Line Company - Billings Transportation Operations facility shall be considered one source for the purpose of permitting these facilities with respect to New Source Review. Based on the following determinations, the facilities are considered one source (ARM 17.8.749 and 17.8.801(7)):
- a. The refinery and the terminal are under common ownership and control.
  - b. The refinery and the terminal are contiguous and adjacent.
  - c. The terminal is considered a support facility to the refinery.
- A.33. Pursuant to ARM 17.8.1211(1)(c) and 40 CFR Part 98, Phillips 66 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.34. Phillips 66 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.35. On or before February 15th and August 15th of each year, Phillips 66 shall submit to the Department the compliance monitoring reports required by Section V.D. 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 15th of each year, Phillips 66 may submit a single report provided that it contains all the information required by Section V.B & V.D (ARM 17.8.1212).

*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.36. By February 15th of each year, Phillips 66 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 (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.”*

- A.37. Phillips 66 shall supply the Department with annual production information for all emissions points, as required by the Department in the annual emissions inventory request. The request will include, but is not limited to, all sources of emissions identified in the most recent emission inventory report and sources identified in the Montana Air Quality Permit.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information is required for the annual emission inventory and to verify compliance with permit limitations. For reporting purposes, the equipment should be identified using the emission point numbers specified, and shall include the following (ARM 17.8.505):

Emission Point	Source	Consumption
<b>Refinery</b>		
1	<b>Boilers - Four (4):</b> #B-1, #B-2, #B-5, #B-6	MMscf of gas, %H <sub>2</sub> S, gal of fuel oil, %S
2	<b>Heaters</b> [“22-Fuel-Gas-Heaters”]: #1	MMscf of gas, %H <sub>2</sub> S
3	#2	
4	#4	
5	#5	
6	Coke Heater (H-3901)	
7	#10: No.2 HDS	
8	#11: No.2 HDS Debutanizer	
9	Reboiler	
10	#12: No.2 HDS Main Frac.	
11	Reboiler	
12	#13: Catalytic Reforming Unit #2	
13	#14: Catalytic Reforming Unit #2	
	#15	
	#16: Saturated Gas Stabilizer	
14	Reboiler and PB Merox Disulfide	
15	Offgas	
16	#17	
17	#18	
18	#19	
20	#20	
21	#21	
28	#23: Catalytic Reforming Unit #2	

Emission Point	Source	Consumption
29 35 43	#24 Recycle Hydrogen Heater (H-8401) Fractionator Feed Heater (H-8402) No. 1 H <sub>2</sub> Reformer Heater (H-9401) No. 2 H <sub>2</sub> Reformer Heater (H-9701)	
22	FCCU	Tons of SO <sub>2</sub> /yr
23	Refinery Main Plant Relief Flare	Tons of SO <sub>2</sub> /yr
24	Storage Tanks	Tons of VOC losses/yr
25	Bulk Loading	Gallons of Gasoline and Gallons of Distillate Throughput
26	Fugitive VOC Emissions	<p>i. The number of the following fugitive VOC emission sources in service subject to 40 CFR 60, Subparts GGG or GGGa.</p> <ul style="list-style-type: none"> <li>a. Gas valves</li> <li>b. Light liquid valves</li> <li>c. Heavy liquid valves</li> <li>d. Hydrogen valves</li> <li>e. Open-end valves</li> <li>f. Flanges</li> <li>g. Pump seals/light liquid</li> <li>h. Pump seals/heavy liquid</li> </ul> <p>ii. The number of the following fugitive VOC emission sources in service not subject to 40 CFR 60, Subparts GGG or GGGa.</p> <ul style="list-style-type: none"> <li>a. Valves</li> <li>b. Flanges</li> <li>c. Pump seals</li> <li>d. Compressor seals</li> <li>e. Relief valves</li> <li>f. Oil/water separators</li> </ul> <p>iii. Process drains</p> <p>iv. Wastewater handling</p> <p>v. Coker drill water handling</p>
27	CPI Separator Tanks	Gallons of wastewater throughput
30	No.1 Hydrogen Plant SMR Heater (22.0 MMscfd)	MMscf of natural gas MMscf of PSA gas
32	Saturate Gas Plant	Monitoring and Maintenance Records
41 42	No.5 HDS Charge Heater No.5 HDS Stabilizer Reboiler Heater	MMscf of gas, %H <sub>2</sub> S
45 46	No.2 H <sub>2</sub> Unit PSA Offgas Vent No.1 H <sub>2</sub> Unit PSA Offgas Vent	Tons CO/yr
47	Temporary Natural Gas	Hours of operation and MMscf of natural gas

Emission Point	Source	Consumption
	Boiler	
51	Engine CG3810 (Backup Coke Crusher)	Maximum sulfur content of the diesel fuel used.
52	Delayed Coking Unit- Vent VOC	Cycles per year
	Delayed Coking Unit- Drum Coke Cutting VOC	Cycles per year
<b>Jupiter</b>		
1	Main ATS Stack a. ATS unit b. Elemental sulfur unit	Tons of Product Produced
2	Jupiter Flare – a. Ammonium sulfide unit	Tons of Product Produced

## B. EU001: Boilers

Main Boiler House Stack Boilers B-1, B-2, B-5, and B-6 and Temporary Boiler

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
B.1, B.14, B.17, B.18, B.29, B.30, B.31, B.36, B.37, B.38, B.39, B.40	SO <sub>2</sub>	300 ton/yr from fuel oil combustion, on a rolling 365-day average	CEMS	Ongoing	Quarterly
			Method 6/6c RATA may substitute	Annually	Semiannually
B.2, B.14, B.17, B.18, B.29, B.30, B.31, B.36, B.37, B.38, B.39, B.40.	SO <sub>2</sub>	1407.8 ton/yr, 3.857 ton/day, 321.4 lb/hr on a rolling 24-hour average basis	CEMS	Ongoing	Quarterly
			Method 6/6c RATA may substitute	Annually	Semiannually
B.3, B.14, B.17, B.18, B.29, B.30, B.31, B.36, B.37, B.38, B.39, B.40.	SIP: SO <sub>2</sub>	964.2 lb/3-hr 7,713.6 lb/cal. day 2,815,464 lb/cal. yr	CEMS	Ongoing	Quarterly
			Method 6/6c RATA may substitute	Annually	Semiannually
B.4, B.15, B.16, B.34, B.39, B.40.	Refinery Fuel Gas	40 CFR 60 Subpart J	40 CFR 60 Subpart J	40 CFR 60 Subpart J	40 CFR 60 Subpart J and Semiannually
B.4, B.15, B.16, B.17, B.29, B.30, B.31, B.34, B.36, B.37, B.38, B.39, B.40.	H <sub>2</sub> S	0.10 grains/dscf on a rolling three-hour average basis	CEMS	Ongoing	Quarterly
			Method 11 (RATA may substitute)	Annually	Semiannually

B.5, B.19, B.29, B.30, B.36, B.37, B.39, B.40.	Opacity	40% / 20%	Method 9	As required by the Department and Section III.A.1	Semiannually
B.6, B.20, B.29, B.30, B.36, B.37, B.39, B.40.	Particulate Matter Fuel Burning Equipment	$E = 0.882 * H^{-0.1664}$ or $E = 1.026 * H^{-0.233}$	Method 5		
B.7, B.21, B.32, B.39, B.40.	B-5 and B-6	40 CFR 60, Subpart Db	40 CFR 60 Subpart Db	40 CFR 60 Subpart Db	40 CFR 60 Subpart Db and Semiannually
B.8, B.24, B.33, B.39, B.40.	B-5 and B-6	40 CFR 63 Subpart DDDDD	40 CFR 63 Subpart DDDDD	40 CFR 63 Subpart DDDDD	40 CFR 63 Subpart DDDDD and Semiannually
B.9, B.22, B.35, B.39, B.40.	B-5 and B-6: NO <sub>x</sub>	Must be equipped with Ultralow NO <sub>x</sub> burners	Recordkeeping	On-going	Semiannually
B.10, B.23, B.25, B.26, B.29, B.30, B.31, B.36, B.37, B.39, B.40.	B-5 and B-6: NO <sub>x</sub>	When fired on RFG, 0.03 lb/MMBtu on a rolling 365-day average or 24.05 ton/yr on a rolling 365-day average	CEMS	Ongoing	Quarterly
			Method 7 and 19	Every 5 years	Semiannually
B.11, B.23, B.29, B.30, B.36, B.37, B.39, B.40.	B-5 and B-6: CO	When fired on RFG, 0.04 lb/MMBtu on a rolling 365-day average	Method 10	Every 5 years	Semiannually
B.12, B.27, B.29, B.35, B.39, B.40.	B-5 and B-6: VOC	4.32 tons/rolling 12-calendar month	Emission Calculations	Semiannually	Semiannually
B.13, B.28, B.35, B.39, B.40.	Temporary Boiler	No more than 51 MMBtu/hr natural gas-fired boiler, operated no more than 8 weeks per rolling 12-month period.	Recordkeeping	Semiannually	Semiannually

### Conditions

- B.1. Phillips 66 shall not exceed 300 tons per year (ton/yr) SO<sub>2</sub> emissions from fuel oil combustion, based on a rolling 365-day average as determined by the existing SO<sub>2</sub> CEMS or replacement SO<sub>2</sub> CEMS subsequently installed and certified. During documented periods of natural gas curtailment, SO<sub>2</sub> emissions from the burning of any liquid fuel shall not be included in the 365-day average (Consent Decree, ARM 17.8.749).
- B.2. SO<sub>2</sub> emissions from the Main Boiler House Stack are limited to 321.4 pounds per hour (lb/hr) calculated on a rolling 24-hour average, 3.857 ton/day, and 1407.8 ton/yr (fuel oil and fuel gas combustion) (ARM 17.8.749, ARM 17.8.1211, ARM 17.8.340, and 40 CFR 60.105).

- B.3. SO<sub>2</sub> emissions from the Main Boiler House Stack are limited to 964.2 pounds per 3-hour period, 7,713.6 pounds per calendar day, and 2,815,464 pounds per calendar year (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- B.4. Phillips 66 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. Each boiler used to combust Refinery Fuel Gas (RFG) at Phillips 66 are fuel gas combustion devices and are considered “affected facilities” under 40 CFR 60, Subparts A and J. Fuel-fired equipment exclusively burning natural gas are not “fuel gas combustion devices” and are not “affected facilities” under 40 CFR 60, Subparts A and J during such periods. Except for periods of startup, shutdown, and malfunction, Phillips 66 shall not burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H<sub>2</sub>S) in excess of 230 milligrams per dry standard cubic meter (mg/dscm) (0.10 grains per dry standard cubic foot (gr/dscf), or ~160 parts per million volume dry basis (ppmvd)) per rolling 3-hour period (Consent Decree, ARM 17.8.749, ARM 17.8.340 and 40 CFR 60, Subpart J).
- B.5. Phillips 66 shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the Main Boiler House Stack, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes, except during times that the exhaust from only boilers B-5 and B-6 are being routed to the main boiler house stack, the opacity limit is 20% (ARM 17.8.304).
- B.6. Phillips 66 shall not cause or authorize particulate matter 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 particulate matter 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 MMBtu per hour and E is the maximum allowable particulate emissions rate in pounds per MMBtu (ARM 17.8.309).
- B.7. Phillips 66 shall comply with all applicable requirements of 40 CFR 60, Subpart Db-Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. Boilers B-5 and B-6 are subject to the Subpart Db requirements (ARM 17.8.340; and 40 CFR 60, Subpart Db).
- B.8. Phillips 66 shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD – National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (ARM 17.8.342 and 40 CFR 63, Subpart DDDDD).
- B.9. Phillips 66 shall equip boilers B-5 and B-6 with Ultra low NO<sub>x</sub> Burners (ULNB) (ARM 17.8.752).

- B.10. NO<sub>x</sub> emissions from boilers B-5 and B-6 shall each, when fired on RFG, not exceed 0.03 pounds per million British thermal unit (lb/MMBtu) based on a rolling 365-day average, or 24.05 ton/yr based on a rolling 365-day average (ARM 17.8.752).
- B.11. Carbon Monoxide (CO) emissions from boilers B-5 and B-6 shall each, when fired on RFG, not exceed 0.04 lb/MMBtu based on a rolling 365-day average (ARM 17.8.752).
- B.12. Volatile organic compound (VOC) emissions from boilers B-5 and B-6 shall each not exceed 4.32 tons/rolling 12-calendar month total (ARM 17.8.752).
- B.13. Phillips 66 shall operate a temporary natural gas-fired boiler for no more than 8 weeks per rolling 12-month period. The temporary boiler shall not exceed a firing rate of 51 MMBtu/hr, and shall only be used during refinery turnarounds (ARM 17.8.749).

### **Compliance Demonstration**

- B.14. Phillips 66 shall install and operate a SO<sub>2</sub> continuous emission monitor system (CEMS) and a volumetric flow rate monitor on the Main Boiler House Stack. SO<sub>2</sub> and volumetric flow rate monitors shall comply with all applicable provisions of 40 CFR Part 60, Appendix B, Performance Specifications 2, 3, and 6 as appropriate and the quality assurance/quality control requirements of 40 CFR 60 Appendix F ((ARM 17.8.749 and ARM 17.8.1211) and Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- B.15. Phillips 66 shall conduct all monitoring and testing as required by 40 CFR 60, Subpart J, Standards of Performance for Petroleum Refineries, to monitor compliance with Section III.B.4. Phillips 66 shall install, calibrate, maintain, and operate a H<sub>2</sub>S CEMS to continuously monitor and record the concentration (dry basis) of H<sub>2</sub>S in the RFG before being burned in any fuel gas combustion device, or develop an Alternate Monitoring Plan (AMP), as required by 40 CFR 60, Subparts A and J. Compliance with the fuel gas H<sub>2</sub>S concentration limit set out in Section III.B.4 shall be monitored based on 3-hour rolling average H<sub>2</sub>S concentrations, determined by utilizing data taken from the CEMS and other Department-approved sampling methods.

The H<sub>2</sub>S CEMS shall be installed, certified, and operated in accordance with Performance Specification 7 (40 CFR 60, Appendix B) to meet applicable provisions of 40 CFR 60.105(a)(4), 60.7, and 60.13. The H<sub>2</sub>S CEMS shall meet the quality assurance and quality control requirements set out in 40 CFR 60, Appendix F (annual Relative Accuracy Test Audits (RATAs)), as provided by the SO<sub>2</sub> Stipulation. The CEMS shall meet applicable quarterly data recovery rates and other provisions of §6(A) of the SO<sub>2</sub> Stipulation (ARM 17.8.340 and 40 CFR 60, Subpart J, Consent Decree, Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002, ARM 17.8.1212, and ARM 17.8.1213).

- B.16. Phillips 66 shall operate and maintain a continuous flow rate monitor on the RFG header. Accuracy determinations for the RFG flow rate monitor shall be required at least once every 48 months or more frequently as routine refinery turn-arounds allow (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- B.17. Compliance with the emission limitations, where applicable, shall be monitored by using data from the CEMS and other Department-approved sampling methods (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).

- a. The above does not relieve Phillips 66 from meeting any applicable requirements of 40 CFR Part 60, Appendices A and B, or other stack testing that may be required by the Department.
  - b. Other stack testing may include, but is not limited to, the following air pollutants: SO<sub>2</sub>, NO<sub>x</sub>, ammonia (NH<sub>3</sub>), CO, particulate matter (PM), particulate matter less than 10 microns (PM<sub>10</sub>), and VOCs.
  - c. Reporting requirements shall be consistent with 40 CFR Part 60, or as specified by the Department. CEMS data and calculations shall be submitted to the Department on a quarterly basis.
  - d. All gaseous (SO<sub>2</sub> and H<sub>2</sub>S) CEMS shall be required to comply with quality assurance/quality control procedures in 40 CFR Part 60, Appendix F. Said CEMS shall be required to be maintained such that it is available and operating at least 90% of the source operating time during any reporting period (quarterly).
  - e. CEM systems are to be in operation at all times when the emission units are operating, except for quality assurance and control checks, breakdowns and repairs, and planned maintenance. In the event the primary CEM system is unable to meet minimum availability requirements, Phillips 66 shall provide a back-up or alternative monitoring system and plan such that continuous compliance can be monitored. The Department shall approve such contingency plans.
- B.18. In order to accurately monitor the SO<sub>2</sub> emission rates in pounds per hour for the Main Boiler House Stack, Phillips 66 shall perform annual source testing using EPA-approved methods (40 CFR Part 60, Appendix A, Methods 1-4 and 6/6C as appropriate for the Stipulation (STIP) and Exhibit A) or an equivalent method approved by the Department and EPA, and in accordance Section III.A.2 of this permit (ARM 17.8.106).
- The annual RATAs required by Section 6(C) and (D) of the STIP may be substituted 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 SO<sub>2</sub> ((ARM 17.8.749 and ARM 17.8.1211) and Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- B.19. As required by the Department and Section III.A.1, Phillips 66 shall conduct, in accordance with Section III.A.2, a Method 9 Opacity test to monitor compliance with Section III.B.5 (ARM 17.8.1213).
  - B.20. As required by the Department and Section III.A.1, Phillips 66 shall conduct, in accordance with Section III.A.2, a Method 5 Particulate Matter test or other Department approved test to monitor compliance with Section III.B.6 (ARM 17.8.1213).
  - B.21. Phillips 66 shall meet, as applicable, the requirements of all testing and procedures of ARM 17.8.340, which reference 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (ARM 17.8.340 and 40 CFR 60, Subpart Db).

- B.22. Phillips 66 shall maintain, on-site, documentation of the ULNB installed, and record any instance when boilers B-5 and B-6 are not operated with ULNB as required by Section III.B.9, including the date, duration, circumstance, and operators initials (ARM 17.8.1213).
- B.23. Phillips 66 shall test boilers B-5 and B-6 for NO<sub>x</sub> and CO, both pollutants concurrently, and monitor compliance with the NO<sub>x</sub> and CO emission limits contained in Sections III.B.10 & III.B.11. The compliance source testing shall be conducted on an every 5-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and 17.8.749).
- B.24. Phillips 66 shall monitor compliance with 40 CFR 63 Subpart DDDDD as required by 40 CFR 63, Subpart DDDDD (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).
- B.25. Phillips 66 shall install and operate NO<sub>x</sub> and oxygen (O<sub>2</sub>) CEMS to monitor compliance with the emission limitations for boilers B-5 and B-6 (ARM 17.8.340 and 40 CFR 60, Subpart Db, and ARM 17.8.749).
- B.26. NO<sub>x</sub> and O<sub>2</sub> CEMS shall be required to comply with quality assurance/quality control procedures in 40 CFR 60, Appendix F and operated in accordance with the performance specifications in 40 CFR 60, Appendix B, Performance Specification 2 and 3 (40 CFR 60.13 and ARM 17.8.749).
- B.27. Phillips 66 shall monitor compliance with the VOC limit for the boilers B-5 and B-6 listed in Section III.B.12 by maintaining records of the fuel gas consumed and using an emission factor, as approved by the Department (ARM 17.8.1213).
- B.28. Phillips 66 shall monitor compliance with the temporary boiler requirements listed in Section III.B.13 by maintaining records of any instances when a temporary boiler is brought on-site. The records shall include the date, duration of use, status of facility operations, fuel, and firing rate of the temporary boiler (ARM 17.8.1213). Further, for every time a Temporary Boiler is brought onsite, Phillips 66 shall provide written notification to the Department of the initiation of operation within 15 days. The notification shall include the year of construction, and maximum natural gas firing rate (ARM 17.8.749).

### **Recordkeeping**

- B.29. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).
- B.30. Recordkeeping compiled for purposes of monitoring compliance with emission limitations shall be retained by Phillips 66 for a minimum of 5 years from the date of record creation (ARM 17.8.1212).
- B.31. CEMS data shall be recorded by a data collections system and shall be maintained under Phillips 66's control for at least 5 years after the date of data generation. This electronic data shall be made available to Department personnel upon request and shall be submitted to the Department upon request (ARM 17.8.1212).
- B.32. Phillips 66 shall keep all records as required by 40 CFR 60, Subpart Db (ARM 17.8.340 and 40 CFR 60, Subpart Db).

- B.33. Phillips 66 shall keep all records as required by 40 CFR 63, Subpart DDDDD (ARM 17.8.340 and 40 CFR 63, Subpart DDDDD).
- B.34. Phillips 66 shall keep all applicable records as required by 40 CFR 60, Subpart J (ARM 17.8.340 and 40 CFR 60, Subpart J).
- B.35. Phillips 66 shall maintain records as required in Section III.B.22, III.B.25, III.B.27, and III.B.28 for a minimum of 5 years from the date of record creation (ARM 17.8.1212).

## Reporting

- B.36. All source test reports shall be submitted to the Department in accordance with Section III.A.2 (ARM 17.8.106).
- B.37. Phillips 66 shall notify the Department in writing of each source test or RATA a minimum of 25 working days prior to the actual testing, unless otherwise specified by the Department (Billings/Laurel SO<sub>2</sub> Emission Control Plan, approved into the SIP by EPA on May 2, 2002).
- B.38. In accordance with Section 7 of the Stipulation, Phillips 66 shall submit quarterly reports within 30 days of the end of each calendar quarter. The quarterly reports shall be submitted to the Department's Permitting and Compliance office in Helena and the appropriate Regional Office from which the Compliance Officer is based from. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- B.39. 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.40. The semiannual reporting shall provide (ARM 17.8.1212):
  - a. A summary of the results of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was submitted to the Department, and the results of the source tests.
  - b. Any records created as required by Section III.B.22 during the reporting period, which shall include the date, duration, and circumstances of any instance when boilers B-5 or B-6 are not operated with ULNB, or statement that no record creation was required.
  - c. A summary of the general calculation methodology used to determine VOC emissions including the emissions factor used and supporting information for that emissions factor, reference to the Department's approval of the emissions factor, and the results of any VOC emissions calculations which indicate noncompliance.
  - d. Temporary boiler records created during the reporting period which shall include the information required by Section III.B.28, or statement that no records were required due to the absence of a temporary boiler onsite.
  - e. Reference to dates that quarterly CEMS reports were submitted.

- f. Summary of compliance with the reporting requirements of 40 CFR 60 Subpart Db during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 60 Subpart Db required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart Db.
- g. Summary of compliance with the reporting requirements of 40 CFR 60 Subpart J during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 60 Subpart J required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart J.
- h. Summary of compliance with the reporting requirements of 40 CFR 63 Subpart DDDDD during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 63 Subpart DDDDD required compliance report or compliance status determination earlier than is required by 40 CFR 63 Subpart DDDDD.

**C. EU002: FCCU**

**FCCU Regenerator**

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
C.1, C.13, C.25, C.31, C.32.	FCCU	40 CFR 60, Subpart J	40 CFR 60 Subpart J	40 CFR 60 Subpart J	40 CFR 60 Subpart J and Semiannually
C.2, C.14, C.26, C.31, C.32.	FCCU	40 CFR 63, Subpart UUU	40 CFR 63 Subpart UUU	40 CFR 63 Subpart UUU	40 CFR 63 Subpart UUU and Semiannually
C.3, C.4, C.5, C.6, C.15, C.17, C.18, C.22, C.23, C.24, C.27, C.28, C.29, C.30, C.31, C.32.	FCCU: SO <sub>2</sub>	48.86 ton/yr	CEMS	Ongoing	Quarterly
		3.945 ton/day	Method 6/6C (RATA may substitute)	Annually	Semiannually
		328.8 lb/hr on a rolling 24-hour average basis	CEMS	Ongoing	Quarterly
		986.4 lb/3-hr	Method 6/6C (RATA may substitute)	Annually	Semiannually
		7,891.2 lb/cal. day	CEMS	Ongoing	Quarterly
		2,880,288 lb/cal. yr	Method 6/6C (RATA may substitute)	Annually	Semiannually
		25 ppmvd @ 0% O <sub>2</sub> rolling 365-day average	CEMS	Ongoing	Quarterly
		50 ppmvd @ 0% O <sub>2</sub> rolling 7-day average	Method 6/6C (RATA may substitute)	Annually	Semiannually
20 lb/ton coke burnoff or fresh feed total sulfur <0.30 wt% on a 7-day rolling average basis	CEMS	Ongoing	Quarterly		
	Method 6/6C (RATA may substitute)	Annually			
	Alternate Operating Scenario	Title V Appendix G	Ongoing		

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration Method Frequency		Reporting Requirements
C.7, C.8, C.15, C.17, C.19, C.22, C.23, C.24, C.27, C.28, C.31, C.32.	FCCU: CO	150 ppmvd @ 0% O <sub>2</sub> /rolling 365-day average	CEMS	Ongoing	Semiannually
		500 ppmvd @ 0% O <sub>2</sub> one-hour average	Method 10 (RATA may substitute)	Annually	
C.9, C.16, C.17, C.22, C.23, C.24, C.27, C.28, C.30, C.31, C.32.	FCCU: NO <sub>x</sub>	49.2 ppmvd @ 0% O <sub>2</sub> 365-day rolling average; and 69.5 ppmvd @ 0% O <sub>2</sub> 7-day rolling average	CEMS	Ongoing	Quarterly
			Method 7E (RATA may substitute)	Annually	
C.10, C.15, C.17, C.22, C.23, C.24, C.27, C.28, C.31, C.32.	FCCU: Opacity	30% except for one six-minute average in any one hour period.	COMS	Ongoing	Semiannually
			Method 9	As required by the Department and Section III.A.1	
C.11, C.20, C.22, C.23, C.27, C.28, C.31, C.32.	PM, Industrial Processes	E= 4.10 * P <sup>0.67</sup> or E= 55 * P <sup>0.11- 40</sup>	Source Testing	As required by the Department and Section III.A.1	
			Source Testing	Annually, unless otherwise authorized	
C.12, C.21, C.22, C.23, C.27, C.28, C.31, C.32.	FCCU: PM	1 lb/1000 lb coke burned	Source Testing	Annually, unless otherwise authorized	

## Conditions

- C.1. Phillips 66 shall comply with all applicable requirements of 40 CFR 60, Subpart J-Standards of Performance for Petroleum Refineries. The FCCU is subject to the Subpart J requirements for opacity, PM, CO and SO<sub>2</sub> (Consent Decree; ARM 17.8.340; and 40 CFR 60, Subpart J).
- C.2. Phillips 66 shall comply with all applicable requirements of 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. The FCCU is subject to the Subpart UUU requirements, including the requirement to 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).
- C.3. SO<sub>2</sub> emissions from the FCCU are limited to 48.86 ton/yr, 3.945 ton/day, and 328.8 lb/hr, calculated on a rolling 24-hour average (ARM 17.8.749).
- C.4. SO<sub>2</sub> emissions from the FCCU are limited to 986.4 pounds per 3-hour period, 7,891.2 pounds per calendar day, and 2,880,288 pounds per calendar year (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).

- C.5. SO<sub>2</sub> emissions from the FCCU shall not exceed 25 ppmvd at 0% O<sub>2</sub> based on a rolling 365-day average, as well as 50 ppmvd at 0% O<sub>2</sub> based on a rolling 7-day average. The 7-day SO<sub>2</sub> emission limit shall not apply during periods of hydrotreater outages at the Billings Refinery or during startup, shutdown or malfunction of the FCCU, or during periods of malfunction of a control system or pollutant-reducing catalyst additive system, provided that Phillips 66 is maintaining and operating its FCCU (including associated air pollution control equipment) in a manner consistent with good air pollution control practices for minimizing emissions in accordance with the EPA-approved good air pollution control plan (see Appendix G of this permit) (Consent Decree, ARM 17.8.749).
- C.6. SO<sub>2</sub> emissions from the FCCU shall not exceed 9.8 kilograms per Megagram (kg/Mg, or 20 lb/ton) coke burnoff on a 7-day rolling average basis, in accordance with 40 CFR 60.104(b)(2) and (c). As an alternative, Phillips 66 shall process in the FCCU fresh feed that has a total sulfur content no greater than 0.30 percent by weight on a 7-day rolling average basis, in accordance with 40 CFR 60.104(b)(3) and (c) (Consent Decree, ARM 17.8.749, ARM 17.8.340 and 40 CFR 60, Subpart J).
- C.7. CO emissions from the FCCU shall not exceed 150 ppmvd at 0% O<sub>2</sub> based on a rolling 365-day average basis (Consent Decree, ARM 17.8.749).
- C.8. CO emissions from the FCCU shall not exceed 500 ppmvd at 0% O<sub>2</sub> based on a one-hour average emission limit. CO emissions during periods of startup, shutdown or malfunctions of the FCCU will not be used for determining compliance with this emission limit, provided that Phillips 66 implements good air pollution control practices to minimize CO emissions (Consent Decree, ARM 17.8.749).
- C.9. NO<sub>x</sub> emissions shall not exceed 49.2 ppmvd corrected to 0% O<sub>2</sub>, on a rolling 365-day average and 69.5 ppmvd, corrected to 0% O<sub>2</sub>, on a rolling 7-day average. The 7-day NO<sub>x</sub> emission limit shall not apply during periods of hydrotreater outages at the Billings Refinery or during startup, shutdown or malfunction of the FCCU, or during periods of malfunction of a control system or pollutant-reducing catalyst additive system, provided that Phillips 66 is maintaining and operating the FCCU (including associated air pollution control equipment) in a manner consistent with good air pollution control practices for minimizing emissions in accordance with the EPA-approved good air pollution control practices plan. For days in which the FCCU is not operating, no NO<sub>x</sub> value shall be used in the average, and those periods shall be skipped in determining the 7-day and 365-day averages (Phillips 66 Consent Decree, Paragraph 27, as amended).
- C.10. Phillips 66 shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the FCCU that exceed an opacity of 30% except for one 6-minute average in any one hour period (Consent Decree, ARM 17.8.340 and 40 CFR 60, Subpart J).
- C.11. Phillips 66 shall not cause or authorize particulate matter to be discharged from any operation, process, or activity into the outdoor atmosphere in excess of the maximum hourly allowable emissions of particulate matter, 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 (ARM 17.8.310).
- C.12. Phillips 66 shall not cause or authorize the FCCU to exceed the PM limit of 1 lb PM/1000 lb coke burned (Consent Decree, ARM 17.8.340, and 40 CFR 60, Subpart J).

## Compliance Demonstration

- C.13. Phillips 66 shall meet, as applicable, the requirements of all testing and procedures of ARM 17.8.340, which reference 40 CFR 60, Subpart J, Standards of Performance for Petroleum Refineries (Consent Decree; ARM 17.8.340; and 40 CFR 60, Subpart J).
- C.14. Phillips 66 shall meet, as applicable, the requirements of all testing and procedures of ARM 17.8.342, which reference 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, including maintaining records to document conformance with procedures in Phillips 66's required OMMP (ARM 17.8.742 and 40 CFR 63, Subpart UUU).
- C.15. The FCCU stack must be equipped and operated with CEMS and Continuous Opacity Monitoring System (COMS) to measure SO<sub>2</sub>, CO, O<sub>2</sub>, volumetric flow, and opacity. The monitoring system shall meet all performance specifications, methods, and procedures. The CEMS shall meet the performance specifications in 40 CFR 60, Appendix B, Performance Specification 1, 2, 3, 4/4A/4B, and 6, and the quality assurance/quality control requirements of 40 CFR 60, Appendix F ((ARM 17.8.749 and ARM 17.8.1211), (ARM 17.8.103(d) and 40 CFR 51, Appendix P, and Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- C.16. The FCCU stack must be equipped and operated with CEMS to measure NO<sub>x</sub>. Emission monitoring shall be subject to 40 CFR 60, Appendix B (Performance Specifications 2 and 3 and Appendix F (Quality Assurance/Quality Control) provisions (ARM 17.8.749 and ARM 17.8.1211).
- C.17. Compliance with the emission limitations contained in Section III.C.3 to III.C.10 shall be monitored using data from the CEMS, COMS, and other Department-approved sampling methods (ARM 17.8.749 and ARM 17.8.1211).
- a. The above does not relieve Phillips 66 from meeting any applicable requirements of 40 CFR 60, Appendices A and B, or other stack testing that may be required by the Department.
  - b. Opacity compliance may also be monitored, via EPA reference Method 9, by a certified observer or monitor.
  - c. Other stack testing may include, but is not limited to, the following air pollutants: SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, CO, PM, PM<sub>10</sub>, and VOCs.
  - d. Reporting requirements shall be consistent with 40 CFR Part 60, or as specified by the Department. SO<sub>2</sub> CEMS data shall be submitted to the Department on a quarterly basis.
  - e. All gaseous (SO<sub>2</sub> and CO) CEMS shall be required to comply with quality assurance/quality control procedures in 40 CFR Part 60, Appendix F. SO<sub>2</sub> CEMS shall be required to be maintained such that it is available and operating at least 90% of the source operating time during any reporting period (quarterly).
  - f. CEM systems are to be in operation at all times when the emission units are operating, except for quality assurance and control checks, breakdowns and repairs. In the event the primary CEM system is unable to meet minimum availability requirements, Phillips 66 shall provide a back-up or alternative monitoring system and plan such that continuous compliance can be monitored. The Department shall approve such contingency plans.
  - g. In the case of GOHDS outages, as described in Section III.C.5, Phillips 66 shall maintain records of actions taken by Phillips 66 to conform to the GOHDS Outage Plan (see Appendix G of this permit).

- C.18. In order to accurately monitor the SO<sub>2</sub> emission rates in lb/hr for the FCCU Stack, Phillips 66 shall perform annual source testing using EPA-approved methods (40 CFR Part 60, Appendix A, Methods 1-4 and 6/6C as appropriate for the Stipulation (STIP) and Exhibit A) or an equivalent method approved by the Department and EPA, and in accordance with Section III.A.1 of this permit (ARM 17.8.106).

The annual RATAs required by Section 6(C) and (D) of the STIP may be substituted for the annual source tests, provided that the flow rate RATA and the concentration RATA are performed simultaneously or concurrently and additional calculations are made to determine and report the data in lb/hr of SO<sub>2</sub> (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).

- C.19. In accordance with Section III.A.1 and as required by the Department, Phillips 66 shall perform Method 10 or other Department approved testing, to monitor compliance with CO limitations in Section III.C.8. The annual RATA may be substituted for the required source test (ARM 17.8.1213).
- C.20. In accordance with Section III.A.1 and as required by the Department, Phillips 66 shall perform Method 5 testing or other Department approved testing on the FCCU stack, to monitor compliance with PM limitations in Section III.C.11 (ARM 17.8.1213).
- C.21. For the life of the Consent Decree, Phillips 66 shall conduct an annual PM stack test on the FCCU stack by December 31<sup>st</sup> unless another testing schedule is approved by EPA, in order to monitor compliance with the PM limitations listed in Section III.C.12. After the life of the Consent Decree, Phillips 66 shall conduct a PM stack test annually, unless another testing schedule is approved by the Department (Consent Decree, ARM 17.8.749).

### **Recordkeeping**

- C.22. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).
- C.23. Recordkeeping compiled for purposes of monitoring compliance with emission limits shall be retained by Phillips 66 for a minimum of 5-years from the date of record creation (ARM 17.8.1212).
- C.24. CEMS data shall be recorded by a data collections system and shall be maintained under Phillips 66's control for at least 5-years after the date of data generation. This electronic data shall be made available to Department personnel upon request and shall be submitted to the Department upon request (ARM 17.8.1212).
- C.25. Phillips 66 shall keep all records as required by 40 CFR 60, Subpart J (ARM 17.8.340 and 40 CFR 60, Subpart J).
- C.26. Phillips 66 shall keep all records as required by 40 CFR 63, Subpart UUU (ARM 17.8.342 and 40 CFR 63, Subpart UUU).

### **Reporting**

- C.27. All source test reports shall be submitted to the Department in accordance with Section III.A.2 (ARM 17.8.106).
- C.28. Phillips 66 shall notify the Department in writing of each source test or RATA a minimum of 25 working days prior to the actual testing, unless otherwise specified by the Department (Billings/Laurel SO<sub>2</sub> Emission Control Plan, approved into the SIP by EPA on May 2, 2002).

- C.29. In accordance with Section 7 of the Stipulation, Phillips 66 shall submit quarterly reports within 30 days of the end of each calendar quarter. The quarterly reports shall be submitted to the Department's Permitting and Compliance office in Helena and the appropriate Regional Office from which the Compliance Officer is based from. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- C.30. Phillips 66 shall report quarterly, the maximum daily NO<sub>x</sub> rolling 365-day average and the maximum NO<sub>x</sub> 7-day rolling average per quarter for the FCCU stack. These reports shall also include NO<sub>x</sub> CEMS quarterly performance (excess emissions and monitor downtime) and Appendix F (Quality Assurance and Quality Control) provisions. FCCU quarterly NO<sub>x</sub> reporting shall be submitted in conjunction with the SO<sub>2</sub> SIP emissions and CEMS/CERMS reporting periods (ARM 17.8.1212).
- C.31. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- C.32. The semiannual reporting shall provide (ARM 17.8.1212):
- a. A summary of the results of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was submitted to the Department, and the results of the source test.
  - b. Dates that the quarterly CEMS reports were submitted.
  - c. Summary of compliance with the reporting requirements of 40 CFR 60 Subpart J during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 60 Subpart J required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart J.
  - d. Summary of compliance with the reporting requirements of 40 CFR 63 Subpart UUU during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 63 Subpart UUU required compliance report or compliance status determination earlier than is required by 40 CFR 63 Subpart UUU.

**D. EU003: Refinery Fuel Gas Combustion Units**

“22-Fuel-Gas-Heater Source”: H-1, H-2, H-4, H-5, H-10, H-11, H-12, H-13, H-14, H-15, H-16, H-17, H-18, H-19, H-20, H-21, H-23, H-24, Coker Heater: H-3901, Recycle Hydrogen Heater: H-8401, Fractionator Heater: H-8402

Additional Refinery Fuel Gas combustion sources:

No. 1 H<sub>2</sub> Unit Reformer Heater: H-9401,

No. 5 HDS Recycle (Charge Heater): H-9501,

No. 5 HDS Fractionator (Stabilizer) Reboiler: H-9502, and

No. 2 H<sub>2</sub> Unit Reformer Heater: H-9701

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
D.1, D.21, D.34, D.38, D.45, D.46.	Fuel combustion	No fuel oil combusted	Recordkeeping	Ongoing	Semiannually
D.2, D.22, D.35, D.38, D.45, D.46.	Amine chemical absorption system	Operation	Recordkeeping	Ongoing	Semiannually

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration Method Frequency		Reporting Requirements
D.3, D.4, D.23, D.24, D.25, D.26, D.27, D.36, D.39, D.41, D.42, D.43, D.44, D.45, D.46.	SO <sub>2</sub>	22-Fuel-Gas-Heater Source: 45.5 ton/yr, 614 lb/day	Method 6/6C (RATA may substitute)	Annual RATA and as required by the Department and Section III.A.1	Semiannually
			CEMS	Ongoing	Quarterly
		All Process Heaters Combined: 87.0 lb/3-hr 696.0 lb/calendar Day 254,040 lb/Calendar year	Method 6/6C (RATA may substitute)	Annual RATA and as required by the Department and Section III.A.1	Semiannually
			CEMS	Ongoing	Quarterly
D.5, D.24, D.27, D.40, D.45, D.46.	Refinery Fuel Gas	40 CFR 60, Subpart J	40 CFR 60, Subpart J	40 CFR 60, Subpart J	40 CFR 60 Subpart J and Semiannually
D.6, D.7, D.24, D.27, D.28, D.36, D.39, D.41-D.46	H <sub>2</sub> S	0.10 grains/dscf on a rolling 3-hour basis	Method 11 (RATA may substitute)	Annually	Semiannually
			CEMS	Ongoing	Quarterly
D.8, D.24, D.27, D.28, D.36, D.39, D.41, D.42, D.43, D.44, D.45, D.46.	H <sub>2</sub> S - specific process heaters	0.073 gr/dscf (116.5 ppmv H <sub>2</sub> S) per rolling 12-months	Method 11 (RATA may substitute)	Annually	Semiannually
			CEMS	Ongoing	Quarterly
D.9, D.24, D.27, D.28, D.36, D.41, D.42, D.45, D.46.	PSA purge gas	Sulfur free purge gas	Method 11	As required by the Department and Section III.A.1	Semiannually
D.10, D.29, D.36, D.41, D.42, D.45, D.46.	NO <sub>x</sub> – Coker Heater	0.08 lb/MMBtu 7.38 lb/hr	Method 7	As required by the Department and Section III.A.1	Semiannually
			Low NO <sub>x</sub> burners	Ongoing	
	NO <sub>x</sub> – Other Furnaces	0.03 lb/MMBtu	Method 7	As required by the Department and Section III.A.1	
			ULNB or Low NO <sub>x</sub> burners w /FGR	Ongoing	
D.11, D.29, D.36, D.41, D.42, D.45, D.46.	Total NO <sub>x</sub> – - Coker Heater, - Recycle Hydrogen	13.54 lb/hr, 58.95 ton/yr	Method 7	As required by the Department and Section	

	Heater, - Fractionator Feed Heater and - No. 1 H <sub>2</sub> Unit Reformer Heater		Ultra Low and Low NO <sub>x</sub> burners	III.A.1 Ongoing	
D.12, D.29, D.36, D.41, D.42, D.45, D.46.	Total NO <sub>x</sub> – - No.5 HDS Charge Heater, - No.5 HDS Stabilizer Reboiler Heater, and - No.2 H <sub>2</sub> Unit Reformer Heater	7.95 lb/hr, 34.19 ton/yr	Method 7 Ultra Low and Low NO <sub>x</sub> burners	As required by the Department and Section III.A.1 Ongoing	
D.13, D.14, D.15, D.30, D.37, D.38, D.45, D.46.	NO <sub>x</sub> Control	Low NO <sub>x</sub> burners, Ultra-low NO <sub>x</sub> burners, and FGR	Recordkeeping	Monthly inspections and any maintenance	
D.16, D.31, D.36, D.41, D.42, D.45, D.46.	CO – - No.1 H <sub>2</sub> Plant Reformer Heater - No.2 H <sub>2</sub> Unit Reformer Heater, - No.5 HDS Stabilizer Reboiler Heater, and - No.5 HDS Charge Heater	Various	Method 10	As required by the Department and Section III.A.1	
D.17, D.18, D.32, D.36, D.41, D.42, D.45, D.46.	Opacity	40% / 20%	Method 9		
D.19, D.33, D.36, D.41, D.42, D.45, D.46.	Particulate Matter, Fuel Burning	$E = 0.882 * H^{-0.1664}$ or $E = 1.026 * H^{-0.233}$	Source Testing as approved by the Department	As required by the Department and Section III.A.1	Semiannually
D.20, D.33, D.36, D.41, D.42, D.45, D.46.	PM <sub>10</sub> and PM <sub>2.5</sub> from H-9401 and H-9701	0.0075 lb/MMBtu per rolling 12-month period	Source Testing as approved by the Department		

### Conditions

- D.1. Phillips 66 shall not burn fuel oil in any of its heaters (ARM 17.8.749).
- D.2. Phillips 66 shall operate and maintain an amine-based chemical absorption system on the refinery fuel gas system (ARM 17.8.752 and ARM 17.8.819).
- D.3. Phillips 66 may not cause or authorize SO<sub>2</sub> emissions from the “22-Fuel-Gas-Heater” source in excess of 614 lb/day on a rolling 24-hour average or 45.5 ton/year on a rolling 12-month average (ARM 17.8.749 and ARM 17.8.1211).

- D.4. Combined emissions of SO<sub>2</sub> for the process heaters shall not exceed 87.0 pounds per 3-hour period, 696.0 pounds per calendar day, 254,040 pounds per calendar year (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- D.5. Phillips 66 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. All process heaters used to combust RFG at Phillips 66 are fuel gas combustion devices and are considered “affected facilities” under 40 CFR 60, Subparts A and J. Fuel-fired equipment exclusively burning natural gas are not “fuel gas combustion devices” and are not “affected facilities” under 40 CFR 60, Subparts A and J during such periods (Consent Decree, ARM 17.8.749, ARM 17.8.340 and 40 CFR 60, Subpart J).
- D.6. Except for periods of startup, shutdown, and malfunction, Phillips 66 shall not burn in any fuel gas combustion device any fuel gas that contains H<sub>2</sub>S in excess of 230 mg/dscm (0.10 gr/dscf, or ~160 ppmvd) per rolling 3-hour period (Consent Decree, ARM 17.8.749, ARM 17.8.340 and 40 CFR 60, Subpart J).
- D.7. H<sub>2</sub>S content of the fuel gas burned in the RFG Heaters/Furnaces shall not exceed 0.10 grains/dscf on a rolling 3-hour average basis (ARM 17.8.749, ARM 17.8.1211, ARM 17.8.340, and 40 CFR 60, Subpart J).
- D.8. H<sub>2</sub>S content of fuel gas shall not exceed 0.073 gr/dscf (116.5 ppmv H<sub>2</sub>S) per rolling 12-month time period, for fuel gas burned in (ARM 17.8.749):
- H-10, No. 2 HDS
  - H-11, Debutanizer Reboiler, No. 2 HDS
  - H-12, Main Frac. Reboiler No. 2 HDS
  - H-13, Catalytic Reforming Unit #2
  - H-14, Catalytic Reforming Unit #2
  - H-16, Stabilizer Reboiler, Sat Gas
  - H-23, Catalytic Reforming Unit #2
  - H-9401, No.1 H<sub>2</sub> Unit Reformer Heater
  - H-9701, No.2 H<sub>2</sub> Unit Reformer Heater
  - H-9501, No.5 HDS Charge Heater
  - H-9502, No.5 HDS Stabilizer Reboiler Heater
- D.9. The Pressure Swing Adsorption (PSA) purge gas, used as furnace fuel for the No.2 H<sub>2</sub> Unit Reformer Heater (H-9701), shall be sulfur free (ARM 17.8.752 and ARM 17.8.1211).
- D.10. NO<sub>x</sub> emissions shall not exceed the limit of (ARM 17.8.752 and ARM 17.8.1211):
- Coker Heater (H-3901)- 0.08 lb/MMBtu and 7.38 lb/hr
  - Recycle Hydrogen Heater (H-8401) - 0.03 lb/MMBtu
  - Fractionator Feed Heater (H-8402) - 0.03 lb/MMBtu
  - No. 1 H<sub>2</sub> Unit Reformer Heater (H-9401) - 0.03 lb/MMBtu
  - No. 2 H<sub>2</sub> Unit Reformer Heater (H-9701) – 0.03 lb/MMBtu per rolling 12-month
  - No. 5 HDS Charge Heater (H-9501) – 0.03 lb/MMBtu per rolling 12-month
  - No. 5 HDS Stabilizer Reboiler Heater (H-9502) – 0.03 lb/MMBtu per rolling 12-month
- D.11. The total NO<sub>x</sub> emissions from the Coker Heater (H-3901), Recycle Hydrogen Heater (H-8401), Fractionator Feed Heater (H-8402), and No. 1 H<sub>2</sub> Unit Reformer Heater (H-9401) shall not exceed the limit of 13.54 lb/hr and 58.95 ton/yr (ARM 17.8.749, ARM 17.8.752, and ARM 17.8.1211).

- D.12. The total NO<sub>x</sub> emissions from the No. 5 HDS Charge Heater (H-9501), the No. 5 HDS Stabilizer Reboiler Heater (H-9502), and the No. 2 H<sub>2</sub> Unit Reformer Heater (H-9701) shall not exceed 7.95 lb/hr and 34.19 tons/year (ARM 17.8.752 and ARM 17.8.1211).
- D.13. Phillips 66 shall equip and maintain low NO<sub>x</sub> burners on the Coker Heater (H-3901) (ARM 17.8.749 and ARM 17.8.1211).
- D.14. Phillips 66 shall equip and maintain ULNB on the Recycle Hydrogen Heater (H-8401), Fractionator Feed Heater (H-8402), No. 5 HDS Charge Heater (H-9501), No. 5 HDS Stabilizer (Fractionator) Reboiler Heater (H-9502), and No. 2 H<sub>2</sub> Plant Reformer Heater (H-9701) (ARM 17.8.749, ARM 17.8.752, and ARM 17.8.1211).
- D.15. Phillips 66 shall equip and maintain low NO<sub>x</sub> burners and Flue Gas Recirculation (FGR) on the No. 1 H<sub>2</sub> Plant Heater (H-9401) (ARM 17.8.749 and ARM 17.8.1211).
- D.16. CO emissions shall not exceed the limit of (ARM 17.8.752 and ARM 17.8.1211):
- No. 1 H<sub>2</sub> Plant Reformer Heater (H-9401) – 0.015 lb/MMBtu based on a rolling 365-day average
  - No. 2 H<sub>2</sub> Unit Reformer Heater (H-9701) – 0.015 lb/MMBtu based on a rolling 365-day average
  - No. 5 HDS Charge Heater (H-9501) – 0.317 lb/MMBtu per rolling 12-month when heater is operating at 10.9 MMBtu/hr or less, and 0.1585 lb/MMBtu per rolling 12-month when heater is operating at 10.9 MMBtu/hr or more
  - No. 5 HDS Stabilizer Reboiler Heater (H-9502) – 0.1585 lb/MMBtu per rolling 12-month when heater is operating at 29.9 MMBtu/hr or less and 0.091 lb/MMBtu per rolling 12-month when heater is operating at 29.9 MMBtu/hr or more
- D.17. Opacity from any of the RFG Heaters/Furnaces constructed prior to 1968 (including but not limited to H-2, H-4, H-5, H-10, H-11, H-12, H-13, H-14, H-15, H-16, H-17, H-18, H-19, H-20, H-21, H-23, H-24) shall not exceed 40% averaged over any 6 consecutive minutes (ARM 17.8.304(1)).
- D.18. Opacity from any of the RFG Heaters/Furnaces constructed after 1968 (including but not limited to H-1, No. 5 HDS Charge Heater, No. 5 HDS Stabilizer Reboiler Heater, No. 2 H<sub>2</sub> Unit Reformer Heater, Coker Heater, Recycle Hydrogen Heater, Fractionator Feed Heater, and Hydrogen Plant Heater, shall not exceed 20% averaged over any 6 consecutive minutes (ARM 17.8.304(2)).
- D.19. Phillips 66 shall not cause or authorize particulate matter 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 particulate matter 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 MMBtu per hour and E is the maximum allowable particulate emissions rate in pounds per MMBtu (ARM 17.8.309).
- D.20. PM<sub>10</sub> and PM<sub>2.5</sub> emissions from the No. 1 H<sub>2</sub> Plant Reformer Heater (H-9401) and the No. 2 H<sub>2</sub> Plant Reformer Heater (H-9701) shall not exceed 0.0075 lb/MMBtu per rolling 12-month time period (ARM 17.8.752 and ARM 17.8.819).

## Compliance Demonstration

- D.21. Phillips 66 shall record any instance in which fuel oil was combusted in any of the Process Heaters for the period, including the date, duration, circumstance, and operators initials (ARM 17.8.1213).
- D.22. Phillips 66 shall document any time the amine-based chemical absorption system on the refinery fuel gas system is not operating (ARM 17.8.1213).
- D.23. As required by the Department and Section III.A.1, Phillips 66 shall perform source testing on the fuel gas combustion units using Method 6/6C or other Department approved test methods, to monitor compliance with the SO<sub>2</sub> limitations in Section III.D.3 and III.D.4 (ARM 17.8.1213).
- D.24. Phillips 66 shall conduct all monitoring and testing as required by 40 CFR 60, Subpart J, Standards of Performance for Petroleum Refineries, to monitor compliance with Section III.D.3 – III.D.9. Phillips 66 shall install, calibrate, maintain, and operate a H<sub>2</sub>S CEMS to continuously monitor and record the concentration (dry basis) of H<sub>2</sub>S in the RFG before being burned in any fuel gas combustion device, or develop an Alternate Monitoring Plan (AMP), as required by 40 CFR 60, Subparts A and J. Compliance with the fuel gas H<sub>2</sub>S concentration limits shall be monitored based on 3-hour rolling average H<sub>2</sub>S concentrations, determined by utilizing data taken from the CEMS and other Department-approved sampling methods.

The H<sub>2</sub>S CEMS shall be installed, certified, and operated in accordance with Performance Specification 7 (40 CFR 60, Appendix B) to meet applicable provisions of 40 CFR 60.105(a)(4), 60.7, and 60.13. The H<sub>2</sub>S CEMS shall meet the quality assurance and quality control requirements set out in 40 CFR 60, Appendix F (annual RATA), as provided by the SO<sub>2</sub> Stipulation. The CEMS shall meet applicable quarterly data recovery rates and other provisions of §6(A) of the SO<sub>2</sub> Stipulation (ARM 17.8.340 and 40 CFR 60 Subpart J; Consent Decree; Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002, ARM 17.8.1212, and ARM 17.8.1213).

- D.25. Phillips 66 shall operate and maintain a continuous flow rate monitor on the RFG header. Accuracy determinations for the RFG flow rate monitor shall be required at least once every 48 months or more frequently as routine refinery turn-arounds allow (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- D.26. Compliance with the SO<sub>2</sub> emission limitation for the RFG fired units, contained in Section III.D.3 and III.D.4, shall be monitored by using hourly average H<sub>2</sub>S concentration and hourly average fuel gas flow rate data from the CEMS and in accordance with the appropriate equations contained in the SIP (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- D.27. Compliance with Section III.D.3 – III.D.9 shall be monitored by utilizing valid data taken from CEMS and other Department approved sampling methods (ARM 17.8.749 and ARM 17.8.1211).
- a. The above does not relieve Phillips 66 from meeting any applicable requirements of 40 CFR Part 60, Appendices A and B, or other stack testing that may be required by the Department.
  - b. Other stack testing may include, but is not limited to, the following air pollutants: SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, CO, particulate matter (PM, PM<sub>10</sub>), and VOCs.

- c. Reporting requirements shall be consistent with 40 CFR Part 60, or as specified by the Department.
  - d. All gaseous (SO<sub>2</sub> and H<sub>2</sub>S) CEMS shall be required to comply with quality assurance/quality control procedures in 40 CFR Part 60, Appendix F. Said CEMS shall be required to be maintained such that it is available and operating at least 90% of the source operating time during any reporting period (quarterly).
  - e. CEM systems are to be in operation at all times when the emission units are operating, except for quality assurance and control checks, breakdowns, and repairs. In the event the primary CEM system is unable to meet minimum availability requirements, Phillips 66 shall provide a back-up or alternative monitoring system and plan such that continuous compliance can be monitored. The Department shall approve such contingency plans.
- D.28. In order to accurately determine the H<sub>2</sub>S concentration in parts per million for the fuel gas-system, Phillips 66 shall perform annual source testing using EPA-approved methods (40 CFR Part 60, Appendix A, Method 11) or an equivalent method approved by the Department and EPA, and in accordance with Section III.A.2 of this permit (ARM 17.8.106) (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- D.29. As required by the Department and Section III.A.1, Phillips 66 shall perform source testing on the fuel gas combustion units using Method 7 or other Department approved test methods to monitor compliance with the NO<sub>x</sub> emission limitations in Section III.D.10, III.D.11, and III.D.12 (ARM 17.8.1213).
- D.30. Compliance with Sections III.D.13, III.D.14, and III.D.15 shall be monitored by monthly inspection of the FGR, Ultra Low and Low NO<sub>x</sub> burners to confirm they are properly installed and operating on the fuel gas combustion units (ARM 17.8.1213).
- D.31. As required by the Department and Section III.A.1, Phillips 66 shall perform source testing on the fuel gas combustion units using Method 10 or other Department approved test methods, to monitor compliance with the CO limitation in Section III.D.16 (ARM 17.8.1213).
- D.32. As required by the Department and Section III.A.1, Phillips 66 shall perform source testing on the fuel gas combustion units using Method 9 to monitor compliance with Section III.D.17 and III.D.18 (ARM 17.8.1213).
- D.33. As required by the Department and Section III.A.1, Phillips 66 shall perform source testing on the fuel gas combustion units using Methods as approved by the Department, as well as record fuel throughput as needed, to monitor compliance with Section III.D.19 and III.D.20 (ARM 17.8.749 and ARM 17.8.1213).

### **Recordkeeping**

- D.34. Phillips 66 shall maintain, under Phillips 66's control, a record of fuel oil consumption as required in Section III.D.21 (ARM 17.8.1212).
- D.35. Phillips 66 shall maintain, under Phillips 66's control, the amine treater operational records required by Section III.D.22 (ARM 17.8.1212).
- D.36. All source testing recordkeeping shall be performed in accordance with the appropriate test method being used and Section III.A.2 (ARM 17.8.106).

- D.37. Phillips 66 shall maintain, under Phillips 66's control, a record of monthly inspection and any maintenance performed on the Ultra Low and Low NO<sub>x</sub> burners (ARM 17.8.1212).
- D.38. Phillips 66 shall maintain, under Phillips 66's control, all records required for monitoring compliance, shall make all records available to Department personnel during inspections, and shall submit the records to the Department upon request (ARM 17.8.1212).
- D.39. CEMS data shall be recorded by a data collections system and shall be maintained under Phillips 66's control for at least 5-years after the date of data generation. This electronic data shall be made available to Department personnel upon request and shall be submitted to the Department upon request (ARM 17.8.1212).
- D.40. Phillips 66 shall keep all records as required by 40 CFR 60 Subpart J (ARM 17.8.340 and 40 CFR 60 Subpart J).

### **Reporting**

- D.41. All source test reports shall be submitted to the Department in accordance with Section III.A.2 (ARM 17.8.106).
- D.42. Phillips 66 shall notify the Department in writing of each source test or RATA a minimum of 25 working days prior to the actual testing, unless otherwise specified by the Department (Billings/Laurel SO<sub>2</sub> Emission Control Plan, approved into the SIP by EPA on May 2, 2002).
- D.43. In accordance with Section 7 of the Stipulation, Phillips 66 shall submit quarterly reports within 30 days of the end of each calendar quarter. The quarterly reports shall be submitted to the Department's Permitting and Compliance office in Helena and the appropriate Regional Office from which the Compliance Officer is based from. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).
- D.44. Phillips 66 shall provide quarterly emission reports from SO<sub>2</sub> related monitors. Emission reporting for SO<sub>2</sub> from all point source locations shall consist of 24-hour calendar day totals per calendar month. The quarterly SO<sub>2</sub> emission report shall also include the following (ARM 17.8.749 and ARM 17.8.1211):
- a. Source or unit operating times during the reporting period.
  - b. Monitoring down time which occurred during the reporting period.
  - c. A summary of excess emissions for each pollutant and averaging period identified in Section III.D.3 through III.D.8.
  - d. Reasons for any emissions in excess of those specifically allowed with mitigation measures utilized and corrective actions taken to prevent a recurrence of the upset condition.

Phillips 66 shall submit quarterly emission reports within 30 days of the end of each calendar quarter.

- D.45. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

D.46. The semiannual reporting shall provide (ARM 17.8.1212):

- a. A summary of the fuel oil combustion records during the reporting period, which shall include the date, duration, circumstance, and operators initials of anytime fuel oil is burned, or statement that no fuel oil was burned during the reporting period.
- b. A summary of the amine treater operations records created during the reporting period, or statement that no records creation was required.
- c. A summary of results of any source testing that was required and submitted to the Department during the reporting period, which shall include the date the source test report was submitted to the Department, and the results of the source tests.
- d. Dates of the monthly inspections and brief summary of any maintenance performed on the Ultra-Low and Low NO<sub>x</sub> burners during the reporting period as described in Section III.D.30.
- e. Dates that quarterly reports of SO<sub>2</sub> CEMS data were submitted.
- f. Summary of compliance with the reporting requirements of 40 CFR 60 Subpart J during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 60 Subpart J required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart J.

**E. EU004: Refinery Main Plant Relief Flare**

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration Method Frequency		Reporting Requirements
E.1, E.8, E.14, E.20, E.23, E.24.	Flare	40 CFR 60 Subpart Ja	40 CFR 60 Subpart Ja	40 CFR 60 Subpart Ja	40 CFR 60 Subpart Ja and Semiannually
E.2, E.3, E.4, E.5, E.9, E.10, E.11, E.13, E.15, E.16, E.17, E.21, E.22, E.23, E.24.	SO <sub>2</sub>	Minimize SO <sub>2</sub> flaring by operating with flare gas recovery system	Recordkeeping	Ongoing	At least Quarterly & as necessary
		Minor Flaring, and 150 lb/3-hr	Reporting & Corrective Action		
		Flaring 500 lbs/24-hr	RCFA and corrective action		
		Offset SO <sub>2</sub> emissions	Recordkeeping		Semiannually
E.6, E.12, E.19, E.23, E.24.	Flare	Equipped and Operated with a Steam Injection System. Tip to Base: at least 142 +/- 2 feet above grade	Recordkeeping	Ongoing	Semiannually

Condition(s)	Pollutant/Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
E.7, E.13, E.18, E.23, E.24.	Flow rate	Flow rate metering shall use approved standards, methods, accounting procedures, and engineering data	Recordkeeping	Monthly	Quarterly

### Conditions

- E.1. Phillips 66 shall comply with all applicable requirements of 40 CFR 60 Subpart Ja, as it applies to the flare.
- E.2. Phillips 66 shall not allow SO<sub>2</sub> emissions from any flare, unless the emissions are a minor flaring event, or are the result of start-up, shutdown, or a malfunction as defined in ARM 17.8.110. A minor flaring event means a flaring event that emits less than or equal to 150 pounds of SO<sub>2</sub> per 3-hour period (Board of Environmental Review Order signed on June 12, 1998, this requirement is "State Only").
- E.3. Except for minor flaring events, Phillips 66 shall minimize SO<sub>2</sub> emissions from flaring. In addition, when flaring of sulfur bearing gases occurs due to a malfunction, Phillips 66 shall take immediate action to correct the malfunction (Board of Environmental Review Order signed on June 12, 1998, this requirement is "State Only").
- E.4. For any acid gas, hydrocarbon, or tail gas flaring incident that results in an emission of SO<sub>2</sub> that is equal or greater than 500 lbs in a 24-hour period, Phillips 66 shall prepare a Root Cause Failure Analysis (RCFA) and corrective action (ARM 17.8.749, Consent Decree and ARM 17.8.1211).
- E.5. SO<sub>2</sub> emission increases, due to upset conditions or discontinuance of the SRU, shall be offset by an equivalent rate from any other sources covered by this permit (ARM 17.8.749 and ARM 17.8.1211).
- E.6. The Refinery Main Plant Relief Flare must be equipped and operated with a steam injection system (ARM 17.8.752 and ARM 17.8.1211). The flare tip height shall be a minimum of 142 feet plus or minus 2 feet above grade (ARM 17.8.749 and ARM 17.8.1211).
- E.7. Any flow rate metering from upset or malfunctioning process units that are directed to either the Refinery Main Plant Relief flare or the SRU flare shall use approved standards, methods, accounting procedures, and engineering data (ARM 17.8.749 and ARM 17.8.1211).

### Compliance Demonstration

- E.8. Phillips 66 shall demonstrate compliance with the requirements of 40 CFR 60 Subpart Ja, as required by 40 CFR 60 Subpart Ja, including through monitoring of emissions and operations as required by 40 CFR 60.107a, the testing requirements of 40 CFR 60.104a, and the applicable recordkeeping and reporting requirements of 40 CFR 60.108 (ARM 17.8.1213).

- E.9. Phillips 66 shall maintain records of the extent and duration of all periods in which the FGRS for the Refinery Main Plant Relief Flare is not operated. During such periods, Phillips 66 shall also measure or estimate (as appropriate) all SO<sub>2</sub> emissions which result from gases being directed to and combusted in the flare. Flow rate metering from upset or malfunctioning process units that are directed to the flare shall use approved standards, methods, accounting procedures, and engineering data (ARM 17.8.1213).
- E.10. For purposes of determining whether a flaring event greater than 150 pounds of SO<sub>2</sub> per 3-hour period or 500 lbs in a 24-hour period has occurred, Phillips 66 shall maintain records of all activities, other than de minimis activities, that result in SO<sub>2</sub> emissions from the flare (Board of Environmental Review Order signed on June 12, 1998, this requirement is "State Only," Consent Decree, and ARM 17.8.1213).
- E.11. Phillips 66 shall maintain, under Phillips 66's control, a record of SO<sub>2</sub> offsets as required by Section III.E.5 (ARM 17.8.1213).
- E.12. Phillips 66 shall maintain, under Phillips 66's control, a record of any changes made to the Refinery Main Plant Relief flare steam injection system or stack height, as required by Section III.E.6, including the date, duration, circumstance, and operators initials (ARM 17.8.1213).
- E.13. Phillips 66 shall provide quarterly emission reports for the Refinery Main Plant Relief flare SO<sub>2</sub> emissions based on H<sub>2</sub>S concentration information and flow information. The quarterly emission reports shall be submitted within 30 days of the end of each calendar quarter. The quarterly report shall consist of 24-hour calendar day totals per calendar month and shall include the following (ARM 17.8.749 and ARM 17.8.1211):
- a. Source or unit operating time during the reporting period.
  - b. Monitoring downtime that occurred during the reporting period.
  - c. A summary of excess emissions for each pollutant and averaging period.
  - d. Emission estimates for SO<sub>2</sub>, other than de minimis activities, from material balance, engineering calculation data, and any emission testing.

### **Recordkeeping**

- E.14. Phillips 66 shall keep all records as required by 40 CFR 60 Subpart Ja (ARM 17.8.340 and 40 CFR 60 Subpart Ja).
- E.15. All source test reports shall be submitted to the Department in accordance with Section III.A.2 (ARM 17.8.106).
- E.16. Recordkeeping compiled for purposes of demonstrating compliance with emission limits shall be retained by Phillips 66 for a minimum of 5-years (ARM 17.8.1212).

- E.17. Phillips 66 shall maintain a record of all flaring events other than flaring caused by de minimis activities. Each entry shall include the date; time; duration; an engineering estimate of the 3-hour emissions and 24-hour emissions; the measured flow rate to the flare, if available; a description of the source and estimated equivalent sulfur content of the gases directed to the flare; a reason for the flaring event; a description of the immediate actions taken to correct the situation; and the operator's initials (Board of Environmental Review Order signed on June 12, 1998, this requirement is "State Only," and ARM 17.8.1213).
- E.18. Phillips 66 shall maintain, under Phillips 66's control, a record of the monthly inspection and maintenance performed on the flow rate-metering device used on upset or malfunctioning process units that are directed to either the Refinery Main Plant Relief flare or the SRU flare (ARM 17.8.1212).
- E.19. The Refinery Main Plant Relief Flare recordkeeping shall be maintained as required in Section III.E.12 (ARM 17.8.1212).

### **Reporting**

- E.20. Phillips 66 shall comply with the applicable reporting requirements of 40 CFR 60 Subpart Ja (ARM 17.8.340 and 40 CF 60 Subpart Ja).
- E.21. For flaring events in excess of 150 lb/3-hr period, Phillips 66 shall comply with the reporting requirements identified in Section (3)(A)(5) of Exhibit A-1 of the Stipulation (Board of Environmental Review Order Signed on June 12, 1998. This requirement is "State Only").
- E.22. For flaring events in excess of 500 lb/24-hr period, Phillips 66 shall prepare a RCFA and corrective action (ARM 17.8.749, Consent Decree and ARM 17.8.1211).
- E.23. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- E.24. The semiannual reporting shall provide (ARM 17.8.1212):

A summary of the results of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was submitted to the Department, and the results of the source tests.

A summary of SO<sub>2</sub> offsets during the reporting period.

A summary of the monthly inspection and maintenance performed on the flow rate-metering devices, which shall include the dates of the inspections and brief summary of any maintenance performed.

A summary of any records created as required by Section III.E.9 during the reporting period, which shall include the extent and duration of all periods during the reporting period in which the FGRS for the Refinery Main Plant Relief Flare is not operated, and the estimated SO<sub>2</sub> emissions during those periods, or statement that no such record creation was required.

A summary of any record creation required by Section III.E.12 regarding any changes made to the Refinery Main Plant Relief flare steam injection system or stack height during the reporting period, or statement that no record creation was required.

Dates that quarterly reports were submitted as required by Section III.E.13.

Dates that any reports required by Section III.E.21 and III.E.22 were made during the reporting period, or statement that no reports were required.

Summary of compliance with the reporting requirements of 40 CFR 60 Subpart Ja during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 60 Subpart Ja required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart Ja.

## F. EU006 – Refinery Fugitive Emissions

C-23 Compressor Station, Delayed Coking Unit, Cryogenic Unit, Hydrogen Membrane Unit, Gasoline Merox Unit, Crude Topping Unit, Crude Vacuum Unit, Fluidized Catalytic Cracking Unit, Catalytic Reforming Unit, Hydrodesulfurization Unit, Gas Oil Hydrotreater Unit (consisting of a reaction section, fractionation section, and an amine treating section), 20.0 MMscfd Hydrogen Plant Feed System, Alkylation Unit Butane Defluorinator (consisting of heat exchangers; X-453, X-223, X-450, X-451, X-452, pumps; P-646, Vessels; D-130, D-359, D-360), PMA Process Unit, Alkylation Unit Depropanizer, Cryo Debutanizer Unit, Butamer/Feed Prep Unit, Gas Recovery Plant Unit, Naphtha Splitter Unit, Sat Gas Plant Unit, Hydrogen Purification Unit, Railcar loading, Cooling Towers, Tank Farm, C-3901 Coker Unit Wet Gas Compressor, C-5301 Flare Gas Recovery Unit Liquid Ring Compressor, C-5302 Flare Gas Recovery Unit Liquid Ring Compressor, C-8301 Cryo Unit Inlet Gas Compressor, C-8302 Cryo Unit Refrigerant Compressor, C-8303 Cryo Unit Regeneration Gas Compressor, C-8401 No. 4 HDS Makeup/Recycle Hydrogen Compressor, C-7401 Hydrogen Makeup/Reformer Hydrogen Compressor, C-9401 #1 Hydrogen Plant Feed Gas Compressor, C-9501 Makeup/Recycle Gas Compressor, C-9701 #2 Hydrogen Plant Feed Gas Compressor, C-8402 Makeup/Recycle Hydrogen Compressor

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
F.1, F.16, F.27, F.28, F.30, F.31	40 CFR 60 Subpart GGG	40 CFR 60 Subpart GGG	40 CFR 60 Subpart GGG	40 CFR 60 Subpart GGG	Semiannually and as required by 40 CFR 60 Subpart GGG
F.2, F.27, F.30, F.31	40 CFR 60 Subpart GGG for Compressors in H <sub>2</sub> Service	40 CFR 60 Subpart GGG	40 CFR 60 Subpart GGG	40 CFR 60 Subpart GGG	Semiannually and as required by 40 CFR 60, Subpart GGG
F.3, F.18, F.27, F.30, F.31	40 CFR 60 Subpart GGGa for Compressors in H <sub>2</sub> Service	40 CFR 60 Subpart GGGa	40 CFR 60 Subpart GGGa	40 CFR 60 Subpart GGGa	Semiannually and as required by 40 CFR 60 Subpart GGGa,

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Method	Demonstration Frequency	Reporting Requirements
F.4, F.19, F.27, F.28, F.30, F.31	40 CFR 60 Subpart GGGa	40 CFR 60 Subpart GGGa	40 CFR 60 Subpart GGGa	40 CFR 60 Subpart GGGa	Semiannually and as required by 40 CFR 60 Subpart GGGa,
F.5, F.20, F.27, F.28, F.30, F.31	40 CFR 63 Subpart CC	40 CFR 63 Subpart CC	40 CFR 63.654	40 CFR 63.654	Semiannually and as required by 40 CFR 63.654
F.6, F.21, F.27, F.30, F.31	40 CFR 60 Subpart Ja	40 CFR 60 Subpart Ja	40 CFR 60 Subpart Ja	40 CFR 60 Subpart Ja	Semiannually and as required by 40 CFR 60 Subpart Ja
F.7– F.10, F.17, F.19, F.22, F.27, F.28, F.30, F.31	All Valves	High quality with high quality packing.	Recordkeeping	As purchased and installed	Semiannually
	Open-Ended Valves	High quality with high quality packing Plugs, caps or a second valve on the open end.			
	Pipe and Tower Flanges	Compatible gasket material			
	Pumps	Mechanical seals			
	C-23 Compressor VOC monitoring, maintenance, and repair program	Monitor and repair as soon as practicable	Recordkeeping	Ongoing	
F.11, F.12, F.22, F.27, F.28, F.30, F.31	Saturate Gas Plant	LDAR	40 CFR 60 Subpart VV	40 CFR 60 Subpart VV	
F.13, F.23, F.27, F.30, F.31	LSG Project	LDAR	40 CFR 60 Subpart VV	40 CFR 60 Subpart VV	
F.14, F.24, F.27, F.30, F.31	Haul Road PM Opacity	20%	Method 9	As required by the Department and Section III.A.1	
F.15, F.25, F.26, F.27, F.30, F.31	Haul Road PM Opacity	20%	Method 9	As required by the Department and Section III.A.1	

### Conditions

- F.1. Phillips 66 shall comply with all applicable requirements of 40 CFR 60 Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries, including as applicable to the following units:
- i. C-3901, Coker Unit Wet Gas Compressor

- ii. C-5301, Flare Gas Recovery Unit Liquid Ring Compressor
  - iii. C-5302, Flare Gas Recovery Unit Liquid Ring Compressor
  - iv. C-8301, Cryo Unit Inlet Gas Compressor
  - v. C-8302, Cryo Unit Refrigerant Compressor
  - vi. C-8303, Cryo Unit Regeneration Gas Compressor
  - vii. C-9401, #1 Hydrogen Plant Feed Gas Compressor
  - viii. C-9701, #2 Hydrogen Plant Feed Gas Compressor
- F.2. Phillips 66 shall comply with all applicable requirements of 40 CFR 63 Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries, as applicable to compressors which are in hydrogen service, including as may be applicable to the following units:
- i. C-8401, No. 4 HDS Makeup/Recycle Hydrogen Compressor
  - ii. C-7401, Hydrogen Makeup/Reformer Hydrogen Compressor
  - iii. C-9501, Makeup/Recycle Gas Compressor
- F.3. Phillips 66 shall comply with all applicable requirements of 40 CFR 63 Subpart GGGa – Standards of Performance for Equipment Leaks in Petroleum Refineries, as applicable to compressor(s) in hydrogen service, including as may be applicable to the C-8402, No. 4 HDS Makeup/Recycle Compressor.
- F.4. Phillips 66 shall comply with all applicable requirements of 40 CFR 63 Subpart GGGa – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After November 7, 2006, including as applicable to the following units:
- i. Delayed coker unit
  - ii. Cryogenic unit
  - iii. Hydrogen membrane unit
  - iv. Gasoline merox unit
  - v. Crude vacuum unit
  - vi. Gas oil hydrotreater unit (consisting of a reaction section, fractionation section, and an amine treating section)
  - vii. No.1 H<sub>2</sub> Unit (22.0-million standard cubic feet per day (MMscfd) hydrogen plant feed system)
  - viii. Alkylation Unit Butane Defluorinator Project (consisting of heat exchangers; X-453, X-223, X-450, X-451, X-452, pumps; P-646, Vessels; D-130, D-359, D-360)
  - ix. Alkylation Unit Depropanizer Project
  - x. #3 Sour Water Stripper (SWS) Unit
  - xi. Fugitive components associated with boilers #B-5 and #B-6
  - xii. The fugitive components associated with the No.2 H<sub>2</sub> Unit and the No.5 HDS Unit
  - xiii. HPU and
  - xiv. Any other applicable equipment constructed or modified after November 7, 2006
- F.5. Phillips 66 shall comply with all applicable requirements of 40 CFR 63 Subpart CC, including compliance with the applicable requirements contained in 40 CFR 60 Subpart VV. In addition, Phillips 66 shall comply with all applicable requirements of 40 CFR 63.648 as they apply to all units subject to 40 CFR 63 Subpart CC that are required to comply with the equipment leak regulations, including, but not limited to the Tank Farm, Large

Crude/Vacuum Unit, Small Crude Unit, #1 & #2 Reformer Unit, #1 & #2 HDS Unit, Cryo Debutanizer Unit, Butamer/Feed Prep Unit, FCCU, Gas Recovery Plant Unit, Alkylation Unit, PB Merox Unit, Naphtha Splitter Unit, Sat Gas Plant Unit, and Hydrogen Purification Unit (ARM 17.8.342 and 40 CFR 63 Subpart CC).

- F.6. Phillips 66 shall comply with 40 CFR 60 Subpart Ja, as is applicable to the Delayed Coking Unit (ARM 17.8.340 and 40 CFR 60 Subpart Ja). Subpart Ja states that each owner or operator of a delayed coking unit shall depressure each coke drum to 5 lb per square inch gauge (psig) or less prior to discharging the coke drum steam exhaust to the atmosphere. Until the coke drum pressure reaches 5 psig, the coke drum steam exhaust must be managed in an enclosed blowdown system and the uncondensed vapor must either be recovered (e.g., sent to the delayed coking unit fractionators) or vented to the fuel gas system, a fuel gas combustion device or a flare.
- F.7. All valves used in equipment subject to 40 CFR 60 Subpart GGGa, as well as the C-23 Compressor station, shall be high quality valves containing high quality packing (ARM 17.8.340 and 40 CFR 60 Subpart GGGa and ARM 17.8.752 (C-23)).
- F.8. All open-ended valves used in equipment subject to 40 CFR 60 Subpart GGGa, as well as the C-23 Compressor station, shall be high quality valves containing high quality packing. They shall have plugs, caps, or a second valve installed on the open end (ARM 17.8.340 and 40 CFR 60 Subpart GGGa and ARM 17.8.752 (C-23)).
- F.9. All pipe and tower flanges used in equipment subject to 40 CFR 60 Subpart GGGa, as well as the C-23 Compressor station, shall be installed using process compatible gasket material (ARM 17.8.340 and 40 CFR 60 Subpart GGGa and ARM 17.8.752 (C-23)).
- F.10. All pumps used in equipment subject to 40 CFR 60 Subpart GGGa, as well as the C-23 Compressor station, shall be fitted with the highest quality state-of-the-art mechanical seals, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart GGGa, and ARM 17.8.752 (C-23)).
- F.11. The C-23 Compressor station shall have a VOC monitoring and maintenance program instituted as described in 40 CFR 60.482-2, 40 CFR 60.482-4 thru 10, 40 CFR 60.483-1 and 2, 40 CFR 60.485, 40 CFR 60.486 (b-k), and 40 CFR 60.486 (c-e) (ARM 17.8.752).
- F.12. If monitoring or scheduled inspections for the C-23 Compressor indicate failure or leakage of the C-23 compressor seal system, then the seals shall be repaired as soon as practicable, but not later than 15 days after it is detected, except as provided in 40 CFR 60.482-9 (ARM 17.8.752).
- F.13. Phillips 66 shall operate and maintain the Saturate Gas Plant according to the Leak Detection and Repair (LDAR) program. Phillips 66 shall monitor and maintain all pumps, shutoff valves, relief valves, and other piping and valves associated with the Saturate Gas Plant, as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.342, 40 CFR 63 Subpart CC and ARM 17.8.752).
- F.14. Phillips 66 shall operate and maintain all new (associated with the Low Sulfur Gasoline (LSG) project) fugitive component VOC emissions in the No.2 HDS Unit, the Gas Oil Hydrodesulfurizer (GOHDS) Unit, and the Tank Farm (including those fugitive emissions associated with the LSG tank) according to the LDAR program (ARM 17.8.342; 40 CFR 63 Subpart CC; and ARM 17.8.752).

- F.15. All access roads shall use either paving or chemical dust suppression to limit excessive fugitive dust with water as a back-up measure to maintain compliance with ARM 17.8.308 and the 20% opacity limitation. Construction and earth-moving activities shall use reasonable precautions to limit excessive fugitive dust to mitigate impacts to nearby residential and commercial places (ARM 17.8.749, ARM 17.8.1211, and ARM 17.8.308).

### **Compliance Demonstration**

- F.16. Compliance monitoring for 40 CFR 60 Subpart GGG shall be performed as required by 40 CFR 60 Subpart GGG, including in accordance with the referenced applicable provisions of 40 CFR 60 Subpart VV (ARM 17.8.340 and 40 CFR 60 Subpart GGG).
- F.17. Phillips 66 shall maintain available on-site at all times, and submit to the Department upon request, demonstration of the hydrogen service status of the compressors in hydrogen service under 40 CFR 60 Subpart GGG. Demonstrations shall conform with the requirements of 40 CFR 60.593(b)(2) and (3), as applicable. If hydrogen service status of a compressor changes, Phillips 66 shall notify the Department of the corresponding status change including submission of a corresponding demonstration, and as applicable, in accordance with 40 CFR 60.593(b)(3)(ii) (ARM 17.8.1213).
- F.18. Phillips 66 shall maintain available on-site at all times, and submit to the Department upon request, demonstration of the hydrogen service status of the compressors in hydrogen service under 40 CFR 60 Subpart GGGa. Demonstrations shall conform with the requirements of 40 CFR 60.593a(b)(2) and (3), as applicable. If hydrogen service status of a compressor changes, Phillips 66 shall notify the Department of the corresponding status change including submission of a corresponding demonstration, and as applicable, in accordance with 40 CFR 60.593a(b)(3)(ii) (ARM 17.8.1213).
- F.19. Compliance monitoring for 40 CFR 60 Subpart GGGa shall be performed as required by 40 CFR 60 Subpart GGGa, including in accordance with the referenced applicable provisions of 40 CFR 60 Subpart VVa (ARM 17.8.1213).
- F.20. Compliance monitoring for 40 CFR 63 Subpart CC shall be performed as required by 40 CFR 63 Subpart CC, including in accordance with 40 CFR 63.654, 63.644, and/or 63.645, as appropriate (ARM 17.8.1213).
- F.21. Phillips 66 shall maintain records demonstrating compliance with the operational requirements of 40 CFR 60 Subpart Ja (ARM 17.8.1213).
- F.22. Phillips 66 shall maintain records, under Phillips 66's control, of all leakage repairs associated with the C-23 compressor seal system. The records shall contain the date, time, repair personnel's initials, and type of repair made (ARM 17.8.1213).
- F.23. Phillips 66 shall maintain records of the Saturate Gas Plant LDAR program, as described in Section III.F.13. Records of monitoring and maintenance shall be maintained on site for a minimum of 5 years (ARM 17.8.342, 40 CFR 63 Subpart CC and ARM 17.8.752).
- F.24. Phillips 66 shall maintain records of the new LSG project LDAR program, as described in Section III.F.14. Records of monitoring and maintenance shall be maintained on site for a minimum of 5 years (ARM 17.8.342, 40 CFR 63 Subpart CC and ARM 17.8.752).

- F.25. As required by the Department and Section III.A.1, Phillips 66 shall perform a Method 9 opacity test on the haul roads to monitor compliance with the 20% opacity limitation as specified in Section III.F.15 (ARM 17.8.1213).

### **Recordkeeping**

- F.26. Phillips 66 shall perform all source testing recordkeeping in accordance with the appropriate test method and Section III.A.2 (ARM 17.8.106).
- F.27. Phillips 66 shall maintain, under Phillips 66's control, all records required for monitoring compliance, shall make all records available to Department personnel during inspections, and shall submit the records to the Department upon request (ARM 17.8.1212).
- F.28. Recordkeeping for equipment leaks shall be performed in accordance with the applicable provisions of 40 CFR 60 Subpart VV, Subpart VVa, and 40 CFR 63.654, 63.644, and/or 63.645, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart GGG and 40 CFR 60 Subpart GGGa and ARM 17.8.342 and 40 CFR 63 Subpart CC).

### **Reporting**

- F.29. Phillips 66 shall submit all source test reports in accordance with Section III.A.2 (ARM 17.8.106).
- F.30. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- F.31. The semiannual reporting shall provide (ARM 17.8.1212):

A summary of the results of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was submitted to the Department, and the results of the source tests.

Summary of compliance with the reporting requirements of 40 CFR 60 Subpart GGG during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 60 Subpart GGG required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart GGG.

Summary of compliance with the reporting requirements of 40 CFR 60 Subpart GGGa during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 60 Subpart GGGa required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart GGGa.

Summary of compliance with the reporting requirements of 40 CFR 63 Subpart CC during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 63 Subpart CC required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart CC.

Summary of compliance with the reporting requirements of 40 CFR 60 Subpart Ja during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 60 Subpart Ja required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart Ja.

## G. EU007 – Sulfur Recovery Facility

- Ammonium Thiosulfate (ATS) Unit,
- Ammonium Sulfide Unit,
- Sulfur Recovery Unit (SRU), and
- Jupiter SRU Flare.

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method Frequency		Reporting Requirements
G.1, G.2, G.22, G.47, G.56, G.61, G.62	Jupiter SRU Flare and Claus units	40 CFR 60 Subpart Ja	40 CFR 60 Subpart Ja	40 CFR 60 Subpart Ja	Semiannually and as required by 40 CFR 60 Subpart Ja
G.3, G.23, G.48, G.57, G.61, G.62G.62	Claus units	40 CFR 63 Subpart UUU	40 CFR 63 Subpart UUU	40 CFR 63 Subpart UUU	Semiannually and as required by 40 CFR 63 Subpart UUU
G.4, G.24, G.55, G.61, G.62	Jupiter SRU flare	Steam injection, flare height of 213 ft	Inspection & Maintenance Records	Ongoing	Semiannually
G.5, G.6, G.25, G.49, G.60, G.61, G.62	Jupiter SRU flare	Minor flaring and 150 lb/3-hr	Reporting and Corrective Action	As necessary	
G.7, G.26, G.50, G.51, G.61, G.62	Flow rate	Flow rate metering shall use approved standards, methods, accounting procedures, and engineering data	Recordkeeping	Quarterly	Quarterly
G.8, G.27, G.51, G.55, G.61, G.62	Clause SRU	Equipped with a Tail Gas Treating Unit	Recordkeeping	Ongoing	Semiannually
G.9, G.28, G.51, G.61, G.62	SRU Incinerator	Equipped with low NO <sub>x</sub> burners	Inspection & Recordkeeping	Semiannually & annually	Semiannually
G.10, G.29, G.30, G.43, G.45, G.46, G.58, G.59, G.61, G.62	SO <sub>2</sub> from SRU/ATS main stack	0.300 ton/day, 25.00 lb/hr	CEMS	Ongoing	
			Method 6/6C  (RATA may substitute)	Annually	
G.11, G.31, G.46, G.58, G.59, G.61, G.62	NO <sub>x</sub> from SRU/ATS main stack	82.85 ton/yr, 454.0 lb/day, 18.92 lb/hr	Method 7	Every 5 years	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Method	Demonstration Frequency	Reporting Requirements
G.12, G.32, G.33, G.46, G.52, G.58, G.59, G.61, G.62	PM/PM <sub>10</sub> from SRU/ATS main stack	34.00 ton/yr, 186.3 lb/day, 7.76 lb/hr	Source Testing	Every 5 years	Semiannually
			CAM	Continuous	
G.13, G.34, G.46, G.58, G.59, G.61, G.62	CO from the SRU/ATS main stack	1.76 ton/yr, 0.40 lb/hr	Method 10	As required by the Department and Section III.A.1	
G.14, G.35, G.51, G.61, G.62	NH <sub>3</sub> from SRU/ATS main stack	58.5 ton/yr, 320.5 lb/day, 13.36 lb/hr	Material Balance	Semiannually	
G.15, G.36, G.46, G.58, G.59, G.61, G.62	Opacity of SRU/ATS main stack and SRU flare	20%	Method 9	As required by the Department and Section III.A.1	
G.16, D.37, G.51, G.61, G.62	SO <sub>2</sub> from SRU flare	0.300 ton/day, 25.00 lb/hr	Material balance	Ongoing	
G.17, G.38, G.51, G.55, G.61, G.62	Jupiter Flare PM and CO	Negligible	Recordkeeping	Semiannually	
G.18, G.39, G.43, G.45, G.46, G.58, G.59, G.61, G.62	H <sub>2</sub> S content of the flare fuel gas (and pilot gas)	0.10 grain/dscf on a 3-hour basis	Method 11	As required by the Department and Section III.A.1	
G.19, G.40, G.51, G.55, G.61, G.62	Total SO <sub>2</sub> from SRU/ATS main stack plus the SRU flare	109.5 ton/yr (rolling 12-month average)	Recordkeeping	Quarterly	
G.20, G.41, G.53, G.61, G.62	Sour Water Stripper Diversion	Report Diversion	Ongoing	Semiannually	
G.21, G.42, G.54, G.61, G.62	Vent off-gas from ASD to B304/B102	Must vent except for malfunctions	Ongoing	Semiannually	

## Conditions

- G.1. Phillips 66 shall comply with all applicable requirements of 40 CFR 60 Subpart Ja, as they apply to the Jupiter SRU flare and the Claus units at the Jupiter sulfur recovery facility and any other applicable equipment (ARM 17.8.749 and ARM 17.8.1211).

- G.2. Phillips 66 shall operate the Jupiter flare such that it only receives process-upset gas, fuel gas that is released to the flare as a result of relief valve leakage, or other emergency malfunctions (as defined in 40 CFR 60, Subpart J) (Consent Decree and ARM 17.8.749).
- G.3. Phillips 66 shall comply with all applicable requirements of 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, including the requirement to 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).
- G.4. Jupiter SRU flare must be equipped and operated with a steam injection system (ARM 17.8.752 and ARM 17.8.1211). Flare tip height is to be based at a minimum of 213 feet from grade, plus or minus 3 feet (ARM 17.8.749 and ARM 17.8.1211).
- G.5. Phillips 66 shall not allow SO<sub>2</sub> emissions from any flare, unless the emissions are a minor flaring event, or are the result of start-up, shutdown, or a malfunction as defined in ARM 17.8.110. A minor flaring event means a flaring event that emits less than or equal to 150 pounds of SO<sub>2</sub> per 3-hour period (Board of Environmental Review Order signed on June 12, 1998. This requirement is "State Only").
- G.6. Except for minor flaring events, Phillips 66 shall minimize SO<sub>2</sub> emissions from flaring. In addition, when flaring of sulfur bearing gases occurs due to a malfunction, Phillips 66 shall take immediate action to correct the malfunction (Board of Environmental Review Order signed on June 12, 1998. This requirement is "State Only").
- G.7. Any flow rate metering from upset or malfunctioning process units that are directed to either the refinery flare or the Jupiter SRU flare shall use approved standards, methods, accounting procedures, and engineering data (ARM 17.8.749 and ARM 17.8.1211).
- G.8. The Clause SRU shall be equipped with a Tail Gas Treating Unit (TGTU) (ARM 17.8.752 and ARM 17.8.819).
- G.9. The Jupiter SRU Incinerator (F-304) shall be equipped with low NO<sub>x</sub> burners (ARM 17.8.749 and ARM 17.8.1211).
- G.10. SO<sub>2</sub> emissions from the Jupiter SRU/ATS main stack shall be limited to 0.30 ton/day, 25.00 lb/hr and 167 ppm on a rolling 12-hour average basis, corrected to 0% O<sub>2</sub> on a dry basis) (ARM 17.8.749 and ARM 17.8.1211).
- G.11. NO<sub>x</sub> emissions from the Jupiter SRU/ATS main stack shall be limited to 82.85 ton/yr, 454.0 lb/day, 18.92 lb/hr (ARM 17.8.749 and ARM 17.8.1211).
- G.12. PM<sub>10</sub> emissions from the Jupiter SRU/ATS main stack shall be limited to 34.00 ton/yr, 186.3 lb/day, 7.76 lb/hr (ARM 17.8.749 and ARM 17.8.1211).
- G.13. CO emissions from the Jupiter SRU/ATS main stack shall be limited to 1.76 ton/yr, 0.40 lb/hr (ARM 17.8.749 and ARM 17.8.1211).
- G.14. NH<sub>3</sub> emissions from the Jupiter SRU/ATS main stack shall be limited to 58.5 ton/yr, 320.5 lb/day, 13.36 lb/hr (ARM 17.8.749 and ARM 17.8.1211).

- G.15. Phillips 66 shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the SRU/ATS main stack or the Jupiter SRU flare that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.749 and ARM 17.8.1211).
- G.16. SO<sub>2</sub> emissions from the Jupiter SRU flare shall be limited to 0.30 ton/day, 25.00 lb/hr (ARM 17.8.749 and ARM 17.8.1211).
- G.17. PM and CO emissions from the Jupiter SRU Flare shall be kept to their negligible levels as indicated in the associated permit application (ARM 17.8.749 and ARM 17.8.1211).
- G.18. H<sub>2</sub>S content of the flare fuel gas (and pilot gas) burned shall not exceed 0.10 grain/dscf on a 3-hour basis, with the exception of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions (ARM 17.8.340, 40 CFR 60 Subpart J, ARM 17.8.749 and ARM 17.8.1211).
- G.19. Total SO<sub>2</sub> emissions from the SRU/ATS main stack, plus the Jupiter SRU flare, shall not exceed 109.5 ton/yr (rolling 12-month average) (ARM 17.8.749 and ARM 17.8.1211).
- G.20. Phillips 66 shall report to the Department any time in which the sour water stripper stream from the refinery is diverted away from the sulfur recovery facility (ARM 17.8.749 and ARM 17.8.1211).
- G.21. Jupiter shall vent off-gas from the Ammonium Sulfide Unit (ASD) unit operation to the B304/B102 sulfur boiler except during malfunction or maintenance conditions, when the off-gases would be vented to the Jupiter SRU flare (ARM 17.8.749).

### **Compliance Demonstration**

- G.22. Phillips 66 shall comply with the test methods and monitoring requirements of 40 CFR 60 Subpart J and Subpart Ja, as applicable (ARM 17.8.340 and 40 CFR 60 Subpart J and Ja, and ARM 17.8.1213).
- G.23. Phillips 66 shall meet, as applicable, the requirements of all testing and procedures of ARM 17.8.342, which reference 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, including maintaining records to document conformance with procedures in Phillips 66's required OMMP (ARM 17.8.342 and 40 CFR 63 Subpart UUU).
- G.24. Phillips 66 shall record any failure in steam injection and any change in flare height for the Jupiter SRU flare, including the date, duration, circumstance, and operators initials (ARM 17.8.1213).
- G.25. For purposes of determining whether a flaring event greater than 150 pounds of SO<sub>2</sub> per 3-hour period has occurred, Phillips 66 shall maintain records of all activities, other than de minimis activities, that result in SO<sub>2</sub> emissions from the flare (Board of Environmental Review Order signed on June 12, 1998. This requirement is "State Only").

- G.26. Phillips 66 shall provide quarterly emission reports for the flare SO<sub>2</sub> emissions based on H<sub>2</sub>S concentration information and flow information. The quarterly emission reports shall be submitted within 30 days of the end of each calendar quarter. The quarterly report shall consist of 24-hour calendar day totals per calendar month and shall include the following (ARM 17.8.749 and ARM 17.8.1211):
- a. Source or unit operating time during the reporting period;
  - b. Monitoring downtime that occurred during the reporting period;
  - c. A summary of excess emissions for each pollutant and averaging period; and
  - d. Emission estimates for SO<sub>2</sub>, other than de minimis activities, from material balance, engineering calculation data, and any emission testing.
- G.27. Phillips 66 shall maintain records of the as-built design of the TGTU equipped on the SRU (ARM 17.8.749 and ARM 17.8.1211).
- G.28. Phillips 66 shall inspect annually the low NO<sub>x</sub> burners on the incinerator and record any maintenance or inspections, including the date, circumstance, and operators initials (ARM 17.8.1213).
- G.29. Phillips 66 shall equip and operate the Jupiter SRU/ATS main stack with a SO<sub>2</sub> CEMS, an O<sub>2</sub> CEMS and a volumetric flow rate continuous emission rate monitor (ARM 17.8.749 and ARM 17.8.1211).
- G.30. Phillips 66 shall use CEMS data to monitor compliance with the SO<sub>2</sub> limitations of Section III.G.10. Phillips 66 shall also perform annual RATAs using Method 6/6C or other Department-approved method (ARM 17.8.1213).
- G.31. Phillips 66 shall conduct compliance source tests on the Jupiter SRU Main stack for NO<sub>x</sub> to determine compliance with Section III.G.11 in 1998, 2002, and every 5 years thereafter (ARM 17.8.1213).
- G.32. Phillips 66 shall use pressure drop across the particulate filters to satisfy the compliance assurance monitoring (CAM) requirements of ARM 17.8 Subchapter 15 for the Jupiter SRU/ATS stack. Operation within the designated indicator ranges is deemed reasonable assurance of on-going compliance with the PM<sub>10</sub> limitations in Section III.G.12 (see the CAM Plan in Appendix F of this permit) (ARM 17.8.1212).
- G.33. In addition to following the CAM Plan, Phillips 66 shall perform source tests on the Jupiter SRU Main stack for PM<sub>10</sub> to determine compliance with the applicable emission standards in Section III.G.2 in 1998, 2002, and every 5 years thereafter (ARM 17.8.749). The pressure drop indicator range or failure criteria will be updated for the CAM Plan, as necessary, based on data from the source test (ARM 17.8.105, ARM 17.8.106, and ARM 17.8.1213 and ARM 17.8.1504).
- G.34. As required by the Department and Section III.A.1, Phillips 66 shall perform a Method 10 source test or other Department approved method to monitor compliance with the CO limitations contained in Section III.G.13 (ARM 17.8.1213).
- G.35. Phillips 66 shall monitor compliance with Section III.G.14 by performing material balance calculations for ammonia (ARM 17.8.1213).

- G.36. As required by the Department and Section III.A.1, Phillips 66 shall perform a Method 9 source test to monitor compliance with the limitations contained in Section III.G.15 (ARM 17.8.1213).
- G.37. As required by the Department and Section III.A.1, Phillips 66 shall perform a Method 11 source test, material balance, or other Department approved method to monitor compliance for the SO<sub>2</sub> limit at the Jupiter SRU flare contained in Section III.G.16 (ARM 17.8.1213).
- G.38. Phillips 66 shall inspect the Jupiter SRU flare annually, and record any maintenance or inspections including the date, duration, circumstance, and operators initials to confirm that the flare is operating properly, in order to comply with Section III.G.17 (ARM 17.8.1213).
- G.39. As required by the Department and Section III.A.1, Phillips 66 shall perform a Method 11 or other Department approved method to monitor compliance with the H<sub>2</sub>S limitation contained in Section III.G.18 (ARM 17.8.1213).
- G.40. Phillips 66 shall maintain records, under Phillips 66's control, containing total SO<sub>2</sub> emissions from the Jupiter SRU/ATS main stack plus the SRU flare for the year using a rolling 12-month average, to monitor compliance with the limitations in Section III.G.19 (ARM 17.8.1213).
- G.41. Phillips 66 shall maintain records any time in which the sour water stripper stream from the refinery is diverted away from the sulfur recovery facility (ARM 17.8.749 and ARM 17.8.1211).
- G.42. Phillips 66 shall maintain records to confirm that the off-gas from the ASD unit operation is vented as permitted to the B304 / B102 Boiler(s) (ARM 17.8.749 and ARM 17.8.1211).
- G.43. Compliance with the emission limitations in Section III.G.10 shall be monitored by utilizing valid data taken from CEMS and other Department-approved sampling methods.

The above does not relieve Phillips 66 from meeting any applicable requirements of 40 CFR 60 Appendices A and B, or other stack testing that may be required by the Department. Other stack testing may include, but is not limited to, the following air pollutants: SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, CO, PM, PM<sub>10</sub>, and VOC.

Reporting requirements shall be consistent with 40 CFR Part 60, or as specified by the Department.

SIP CEMS (SO<sub>2</sub>) shall be required to be maintained such that they are available and operating at least 90% of the source operating time during any reporting period (quarterly).

- G.44. In order to accurately monitor the SO<sub>2</sub> emission rates in pounds per hour for the SRU/ATS Main Stack, Phillips 66 shall perform annual source testing using EPA-approved methods (40 CFR Part 60, Appendix A, Methods 1-4 and 6/6C as appropriate for the Stipulation (STIP) and Exhibit A) or an equivalent method approved by the Department and EPA, and in accordance Section III.A.2 of this permit (ARM 17.8.106).  
The annual RATAs required by Section 6(C) and (D) of the STIP may be substituted 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 SO<sub>2</sub> ((ARM 17.8.749 and ARM 17.8.1211) and Billings/Laurel SO<sub>2</sub> Control Plan, approved into the SIP by EPA on May 2, 2002).

- G.45. Phillips 66 shall provide quarterly emission reports from SO<sub>2</sub> emission rate monitors. Emission reporting for SO<sub>2</sub> from all point source locations shall consist of 24-hour calendar day totals per calendar month. The quarterly report shall be submitted within 30 days of the end of the calendar quarter and include the following: (ARM 17.8.749 and ARM 17.8.1211):
- a. Source or unit operating times during the reporting period;
  - b. Monitoring downtime that occurred during the reporting period;
  - c. A summary of excess emissions for each pollutant and averaging period identified under each emission unit; and
  - d. Reasons for any emissions in excess of those specifically allowed, with mitigative measures utilized and corrective actions taken to prevent a recurrence of the upset situation.

### **Recordkeeping**

- G.46. Phillips 66 shall perform all source testing recordkeeping in accordance with the appropriate test method and Section III.A.2 (ARM 17.8.106).
- G.47. Phillips 66 shall maintain recordkeeping in accordance with 40 CFR 60 Subpart J and Ja, as applicable (ARM 17.8.340 and 40 CFR 60 Subpart J and Ja).
- G.48. Phillips 66 shall keep all records as required by 40 CFR 63 Subpart UUU (ARM 17.8.342 and 40 CFR 63 Subpart UUU).
- G.49. Phillips 66 shall maintain a record of all flaring events other than flaring caused by de minimis activities. Each entry shall include the date; time; duration; an engineering estimate of the 3-hour emissions; the measured flow rate to the flare, if available; a description of the source and estimated equivalent sulfur content of the gases directed to the flare; a reason for the flaring event; a description of the immediate actions taken to correct the situation; and the operator's initials (Board of Environmental Review Order signed on June 12, 1998. This requirement is "State Only").
- G.50. Phillips 66 shall maintain, under Phillips 66's control, a record of the monthly inspection and maintenance performed on the flow rate-metering device used on upset or malfunctioning process units that are directed to either the refinery flare or the SRU flare (ARM 17.8.1212).
- G.51. Phillips 66 shall maintain, under Phillips 66's control, all records required for compliance demonstration, shall make all records available to Department personnel during inspections, and shall submit the records to the Department upon request (ARM 17.8.1212).
- G.52. Phillips 66 shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to ARM 17.8.1512 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under ARM 17.8 Subchapter 15 (ARM 17.8.1212 and ARM 17.8.1513).

- G.53. Phillips 66 shall report to the Department any time in which the sour water stripper stream from the refinery is diverted away from the sulfur recovery facility. Said excess emission reports shall include the period of diversion, estimate of lost raw materials (H<sub>2</sub>S and NH<sub>3</sub>), and resultant pollutant emissions, including circumstances explaining the diversion of this stream. Said excess emission reports shall discuss what corrective actions will be taken to prevent recurrences of the situation and what caused the upset. These reports shall address, at a minimum, the requirements of ARM 17.8.110 (ARM 17.8.749 and ARM 17.8.1211).
- G.54. Phillips 66 shall report to the Department any time in which the off-gas from the ASD unit is not vented to the B304/B102 boiler, including when the off-gas is vented to the Jupiter SRU flare (ARM 17.8.749 and ARM 17.8.1211).
- G.55. Phillips 66 shall maintain records as required by Section III.G.24, III.G.27, III.G.37, III.G.38, and III.G.40 (ARM 17.8.1212).

### **Reporting**

- G.56. Phillips 66 shall comply with the applicable reporting requirements of 40 CFR 60 Subpart J and 40 CFR 60 Subpart Ja (ARM 17.8.340 and 40 CFR 60 Subpart J and Ja).
- G.57. Phillips 66 shall comply with the applicable reporting requirements of 40 CFR 63 Subpart UUU (ARM 17.8.342 and 40 CFR 63 Subpart UUU).
- G.58. All source test reports shall be submitted to the Department in accordance with Section III.A.2 (ARM 17.8.106).
- G.59. Phillips 66 shall notify the Department in writing of each source test or RATA a minimum of 25 working days prior to the actual testing, unless otherwise specified by the Department (Billings/Laurel SO<sub>2</sub> Emission Control Plan, approved into the SIP by EPA on May 2, 2002).
- G.60. For flaring events in excess of 150 lb/3-hr period, Phillips 66 shall comply with the reporting requirements identified in Section (3)(A)(5) of the Exhibit A-1 of the Stipulation (Board of Environmental Review Order Signed on June 12, 1998. This requirement is "State Only").
- G.61. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- G.62. The semiannual reporting shall provide (ARM 17.8.1212):
- a. A summary of the results of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was submitted to the Department, and the results of the source tests.
  - b. A summary of the records required by Section III.G.24, which shall include the date, duration, circumstance, and operators initials noting any failure in steam injection. Phillips 66 shall also include any notification of any change in flare height for the Jupiter SRU flare.

- c. A summary of the records required by Section III.G.50, which shall include the dates that monthly inspection and maintenance was performed on the flow rate-metering device used on upset or malfunctioning process units that are directed to either the refinery flare or the SRU flare.
- d. A report of any changes to the as-built design of the TGTU, or statement that no changes have occurred.
- e. Dates that Phillips 66 inspected the Jupiter SRU flare and summary of any maintenance performed during the reporting period, as required by Section III.G.38. As inspection is required only once per year, statement that no inspection during the reporting period occurred may be within compliance for a semi-annual reporting period.
- f. A summary of the SO<sub>2</sub> compliance demonstration methodology as used in Section III.G.37, with any non-compliance during the semiannual period noted.
- g. Dates that reports required by Section III.G.60, regarding flaring events in excess of 150 lb/3-hr period, were made during the reporting period, or statement that no such report was required during the reporting period.
- h. Dates that reports required by Section III.G.53, regarding sour water stripper stream, were created during the reporting period, or statement that no such report was required during the reporting period.
- i. Dates that reports required by Section III.G.54, regarding off-gas from the ASD unit, were created during the reporting period, or statement that no such report was required during the reporting period.
- j. Dates that the quarterly emission reports were submitted as required by Section III.G.45.
- k. Summary of compliance with the reporting requirements of 40 CFR 60 Subpart J and 40 CFR 60 Subpart Ja during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 60 Subpart J or 40 CFR 60 Subpart Ja required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart J or 40 CFR 60 Subpart Ja.
- l. Summary of compliance with the reporting requirements of 40 CFR 63 Subpart UUU during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 63 Subpart UUU required compliance report or compliance status determination earlier than is required by 40 CFR 63 Subpart UUU.

## H. EU008 – Storage Tanks (Non-Wastewater)

Refinery MACT 1 Group 1:

- Crude Oil Storage Tanks #1, #2, and T-1102
- Gasoline, Naphtha, and Other Storage Tanks: #3, #5, #7, #9, #12, #16, #21, #41, #42, #45, #46, #49, #52, #55, #72, #75, #80, #86, #87, #102, #110, #851, #2909

Refinery MACT 1 Group 2:

- Asphalt and PMA Storage Tanks #4, #62, #100, #101 & #3201
- Jet A, Distillate, and Diesel Storage Tanks #8, #10, #14, #20, #33, #47, #48, #53, #54, #57, #74,
- Residual and Fuel Oil Storage Tanks #6, #17, #39, #40, #69, #70, #81, #107
- Other Storage Tanks #11, #13, #18, #32, #59, #60, #82, #88, #91, #92, #116, #801

Organic Liquid Distribution (OLD) MACT:

- Proto Gas Tanks #2901 - #2907
- Dye & Other Tanks #78, #79 & #109

Other:

- Propane Tanks
- Tank #36 (out of service)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Method	Demonstration Frequency	Reporting Requirement
H.1, H.8, H.15, H.21& H.22	Tank 49	Internal floating roof with double rim seal	Inspection	Annually	Semiannually
H.2, H.9, H.16, H.21& H.22	Tanks 91, 92	40 CFR 60 Subpart K	40 CFR 60.113	As specified	Semiannually
H.3, H.10, H.16, H.21& H.22	Tanks 100, 101, 102	40 CFR 60 Subpart Ka	40 CFR 60.113a and/or 40 CFR 60.114a	As specified	Semiannually
H.4, H.11, H.16, H.20- H.22	Tanks 36, 72, 107, 110, 851, 1102, 2909, 3201	40 CFR 60 Subpart Kb	40 CFR 60.113b and/or 40 CFR 60.114b	As specified	40 CFR 60.115b and Semiannually
H.5, H.12, H.17, H.21& H.22	Tank 3201	40 CFR 60 Subpart UU	40 CFR 60.474	As specified	Semiannually
H.6, H.13, H.18, H.21& H.22	Group 1 Storage Vessels	40 CFR 63.646 Subpart CC	40 CFR 63.646, Subpart CC	40 CFR 63.646, Subpart CC	40 CFR 63.654, Subpart CC and Semiannually
H.7, H.14, H.19, H.21& H.22	OLD Storage Vessels	40 CFR 63 Subpart EEEE	40 CFR 63 Subpart EEEEE	40 CFR 63 Subpart EEEEE	40 CFR 63 Subpart EEEEE and Semiannually

### Conditions

- H.1. Storage tank #49 shall be equipped with an internal floating roof with a double rim seal, liquid-mounted seal, or mechanical shoe seal system for VOC loss control (ARM 17.8.752 and ARM 17.8.1211).

H.2. All volatile organic storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction or modification commenced after June 11, 1973, and prior to May 19, 1978, shall comply with requirements of 40 CFR 60 Subpart K. These requirements shall be as specified in 40 CFR 60.110 through 60.113. The affected tanks include, but are not limited to, tanks 91\* and 92\* (ARM 17.8.340 and 40 CFR 60 Subpart K).

*\* Currently exempt from all emission control provisions due to vapor pressure of material stored.*

H.3. All volatile organic storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction or modification commenced after May 18, 1978, and prior to July 23, 1984, shall comply with requirements of 40 CFR 60 Subpart Ka. These requirements shall be as specified in 40 CFR 60.110a through 60.115a. The affected tanks include, but are not limited to, the following (ARM 17.8.340 and 40 CFR 60 Subpart Ka):

Tank Number

T-100\*

T-101\*

T-102

*\* Currently exempt from all emission control provisions due to vapor pressure of material stored.*

H.4. All volatile organic storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction or modification commenced after July 23, 1984, shall comply with requirements of 40 CFR 60 Subpart Kb. These requirements shall be as specified in 40 CFR 60.110b through 60.115b. The affected tanks include, but are not limited to, the following (ARM 17.8.340 and 40 CFR 60 Subpart Kb):

Tank Number

T-36 (currently out of service)

T-72

T-107\*

T-110\*

T-851

T-1102

T-2909

T-3201\*

*\* Currently exempt from all emission control provisions due to vapor pressure of material stored.*

H.5. The asphalt storage tank T-3201 and any other applicable storage tanks which commenced construction or modification after May 26, 1981, shall comply with all applicable requirements of 40 CFR 60 Subpart UU. Asphalt storage tank T-3201 shall comply with the standards of 40 CFR 60.472(c), including that opacity shall not exceed 0%, except for one consecutive 15-minute period in any 24-hour period when the transfer lines are being blown clear (ARM 17.8.340 and 40 CFR 60 Subpart UU).

H.6. All Group 1 Storage Vessels shall comply with all applicable requirements of 40 CFR 63 Subpart CC (ARM 17.8.342 and 40 CFR 63 Subpart CC).

- H.7. All applicable (non-gasoline) Storage Vessels, including but not limited to Proto Gas and dye storage tanks, shall comply with all applicable requirements of 40 CFR 63 Subpart EEEE (ARM 17.8.342 and 40 CFR 63 Subpart EEEE).

### **Compliance Demonstration**

- H.8. Phillips 66 shall perform annual inspections on Tank #49 to determine integrity of the roof, seal systems associated with the floating roof, and vents (ARM 17.8.1213).
- H.9. Phillips 66 shall monitor compliance with Section III.H.2 by complying with 40 CFR 60.113 (ARM 17.8.340 and 40 CFR 60 Subpart K).
- H.10. Phillips 66 shall monitor compliance with Section III.H.3 by complying with 40 CFR 60.113a and/or 40 CFR 60.114a (ARM 17.8.340 and 40 CFR 60 Subpart Ka).
- H.11. Phillips 66 shall monitor compliance with Section III.H.4 by complying with 40 CFR 60.113b and/or 40 CFR 60.114b (ARM 17.8.340 and 40 CFR 60 Subpart Kb).
- H.12. Phillips 66 shall monitor compliance with Section III.H.5 by complying with 40 CFR 60.474 (ARM 17.8.340 and 40 CFR 60 Subpart UU).
- H.13. Phillips 66 shall monitor compliance with storage vessel provisions of 40 CFR 63.646 (ARM 17.8.342 and 40 CFR 63 Subpart CC).
- H.14. Phillips 66 shall monitor compliance with storage vessel provisions of 40 CFR 63 Subpart EEEE (ARM 17.8.342 and 40 CFR 63 Subpart EEEE).

### **Recordkeeping**

- H.15. Phillips 66 shall maintain, under Phillips 66's control, a record of all inspections performed on Tank #49 as specified in Section III.H.8. This record shall contain the date, time, inspector's initials and the results of the inspection. If corrective action or repairs are made, a summary should be included in the records (ARM 17.8.1212).
- H.16. Phillips 66 shall maintain a record, under Phillips 66's control, for the monitoring required by 40 CFR 60.113, 40 CFR 60.115a, 40 CFR 60.115b, and 40 CFR 60.116b (ARM 17.8.340 and 40 CFR 60 Subpart K, Ka, and Kb).
- H.17. Phillips 66 shall maintain a record, under Phillips 66's control, for the monitoring required by 40 CFR 60.473 (ARM 17.8.340 and 40 CFR 60 Subpart UU).
- H.18. Phillips 66 shall comply with recordkeeping requirements of 40 CFR 63.646 and 63.654 (ARM 17.8.342 and 40 CFR 63 Subpart CC).
- H.19. Phillips 66 shall comply with recordkeeping requirements of 40 CFR 63.2390 (ARM 17.8.342 and 40 CFR 63 Subpart EEEE).

### **Reporting**

- H.20. Phillips 66 shall submit reports in accordance with 40 CFR 60.115b (ARM 17.8.340 and 40 CFR 60 Subpart Kb).

- H.21. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- H.22. The semiannual reporting shall provide (ARM 17.8.1212):
- a. A summary of the results of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was submitted to the Department, and the results of the source tests.
  - b. Dates that Phillips 66 conducted inspections of Tank #49 to determine integrity of the roof, seal systems associated with the floating roof, and vents. As inspection is required only once per year, statement that no inspection during the reporting period occurred may be within compliance for a semi-annual reporting period.
  - c. Summary of compliance with the reporting requirements of 40 CFR 60 Subpart UU during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 60 Subpart UU required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart UU.
  - d. Summary of compliance with the reporting requirements of 40 CFR 63 Subpart CC during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 63 Subpart CC required compliance report or compliance status determination earlier than is required by 40 CFR 63 Subpart CC.
  - e. Summary of compliance with the reporting requirements of 40 CFR 63 Subpart EEEE during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 63 Subpart EEEE required compliance report or compliance status determination earlier than is required by 40 CFR 63 Subpart EEEE.

**I. EU0010 – Wastewater Treatment & Wastewater Storage Tanks**

Wastewater Tanks:

- #15 – sour water
- #34, #35 & #164 – Slop Oil
- #4523 - WW Surge

Wastewater Separators:

- #163 – primary separator
- #169 & #170 – secondary separators (Corrugated Plate Interceptor (CPI) Separators)
- #4510 & #4511 – Desalter Break
- #4512 & #4513 – Coker Break

Oily Water Sewer Drain Systems:

- Coker unit,
- gas oil hydrotreater,
- No.1 Hydrogen Unit (20.0 MMscfd),
- No.2 Hydrogen Unit and No. 5 HDS Unit,
- C-23 compressor station,
- Alkylation Unit Butane Defluorinator Project,
- Alkylation Unit Depropanizer Project,
- #3 Sour Water Stripper (SWS),
- South Tank Farm, and
- Associated wastewater tanks

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
I.1, I.7, I.13, I.19, I.21& I.22	Tanks 35	40 CFR 60 Subpart Kb	40 CFR 60.113b and/or 40 CFR 60.114b	As specified	Semiannually
I.2, I.8, I.14, I.20– I.22	Wastewater Treatment	40 CFR 60 Subpart QQQ	40 CFR 60 Subpart QQQ	40 CFR 60 Subpart QQQ	Semiannually and 40 CFR 60 Subpart QQQQ
I.3, I.9, I.15, I.21& I.22	Wastewater Treatment	40 CFR 61 Subpart FF	40 CFR 61 Subpart FF	40 CFR 61 Subpart FF	Semiannually and 40 CFR 61 Subpart FF
I.4, I.10, I.16, I.21& I.22	Refinery MACT 1 Group 1 Storage Vessels	40 CFR 63 Subpart CC	40 CFR 63.646	40 CFR 63.646	Semiannually and 40 CFR 63 Subpart CC
I.5, I.11, I.17, I.21& I.22	Tanks 4510, 4511, 4512, and 4513	Internal floating roof with double rim seals or liquid mounted seal system.	Inspection	Annually	Semiannually
I.6, I.12, I.18, I.21& I.22	CPI Separator Tanks #169 & #170	Carbon Canisters designed and operated to reduce VOC emissions by 95%	Recordkeeping	On-going	

## Conditions

- I.1. All volatile organic storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction or modification commenced after July 23, 1984, shall comply with requirements of 40 CFR 60 Subpart Kb. These requirements shall be as specified in 40 CFR 60.110b through 60.115b. The affected tanks include, but are not limited to, Tanks #35 (ARM 17.8.340 and 40 CFR 60 Subpart Kb).
- I.2. Phillips 66 shall comply with all applicable requirements of 40 CFR 60 Subpart QQQ. This subpart applies to, but is not limited to wastewater separators and oily water sewer drain systems and any other applicable equipment constructed, modified, or reconstructed after May 4, 1987, for requirements not overridden by 40 CFR 63 Subpart CC (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).
  - a. All process drains shall consist of tightly sealed caps or P-leg traps for sewer drains with intermittent flow.
  - b. The secondary oil/water separator shall be an oil/water (CPI) separator with hydrocarbon collection and recovery equipment.
  - c. All equipment shall be operated and maintained as required under 40 CFR 60 Subpart QQQ.
- I.3. Phillips 66 shall comply with all applicable requirements of 40 CFR 61 Subpart FF. This subpart applies to, but is not limited to, all new or recommissioned wastewater sewer drains associated with the Alkylation Unit Depropanizer Project; the refinery's existing sewer system; #3 SWS Unit, the new individual drain system for the waste stream associated with the No. 2 H<sub>2</sub> Unit and the No. 5 HDS Unit, and tanks 34 and 35 (ARM 17.8.341 and 40 CFR 61 Subpart FF).
- I.4. All Group 1 Storage Vessels shall comply with all applicable requirements of 40 CFR 63 Subpart CC, except for those tanks subject to requirements under 40 CFR 60 Subpart Kb (ARM 17.8.342 and 40 CFR 63, Subpart CC).
- I.5. Storage tank #4510, #4511, #4512, and #4513 shall be equipped with an internal floating roof with a double rim seal system or liquid mounted seal system for VOC loss control (ARM 17.8.752 and ARM 17.8.1211).
- I.6. Phillips 66 shall operate and maintain two (2) CPI separator tanks with carbon canister total VOC controls to comply with 40 CFR 60 Subpart QQQ and 40 CFR 61 Subpart FF regulations. The CPI separators will be vented to two (2) carbon canisters in series, designed and operated to reduce VOC emissions by 95% or greater, with no detectable emissions from the closed vent system (ARM 17.8.340; 40 CFR 60 Subpart QQQ; ARM 17.8.341; and 40 CFR 61 Subpart FF).

## Compliance Demonstration

- I.7. Phillips 66 shall monitor compliance with Section III.I.1 by complying with 40 CFR 60.113b and/or 40 CFR 60.114b (ARM 17.8.340 and 40 CFR 60, Subpart Kb).
- I.8. Phillips 66 shall meet the requirements of all applicable testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart QQQ, Standards of Performance for Volatile Organic Compound Emissions from Petroleum Refinery Wastewater Systems (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

- I.9. Phillips 66 shall monitor the exhaust vent stream from the wastewater CPI separators carbon-adsorption system (T-169 & T-170 carbon canisters) on a regular schedule according to the requirements contained in 40 CFR 60 Subpart QQQ, Section 60.695(a)(3)(ii) and 40 CFR 61 Subpart FF Section 61.354(d). The existing carbon shall be replaced with fresh carbon immediately when carbon breakthrough is indicated. The device shall be monitored on a daily basis, when the wastewater treatment is operational. The time period may be revised by the Department in the event that the carbon absorption system is upgraded or physically altered (ARM 17.8.749).
- I.10. Phillips 66 shall monitor compliance with applicable wastewater provisions of 40 CFR 63.647 (ARM 17.8.342 and 40 CFR 63 Subpart CC).
- I.11. Phillips 66 shall perform annual inspections on Tank #4510, #4511, #4512, and #4513 to determine integrity of the roofs, seal systems associated with the floating roofs, and vents (ARM 17.8.1213).
- I.12. Phillips 66 shall record any instance that carbon canisters are not used on the CPI Separator Tanks and any instance in which they may be operating without reducing VOC emissions by 95% or greater. The record shall include the date, duration, circumstances of the deviation, and operators initials (ARM 17.8.1213).

### **Recordkeeping**

- I.13. Phillips 66 shall maintain a record, under Phillips 66's control, for the monitoring required by 40 CFR 60.115b, and 40 CFR 60.116b (ARM 17.8.340 and 40 CFR 60 Subpart Kb).
- I.14. Phillips 66 shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart QQQ, for requirements not overridden by 40 CFR 63 Subpart CC (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).
- I.15. Phillips 66 shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 61 Subpart FF (ARM 17.8.341 and 40 CFR 60, Subpart FF).
- I.16. Phillips 66 shall comply with recordkeeping requirements of 40 CFR 63.646 and 63.654 (ARM 17.8.342 and 40 CFR 63 Subpart CC).
- I.17. Phillips 66 shall maintain, under Phillips 66's control, a record of all inspections performed on the tanks listed in Section III.I.11. This record shall contain the date, time, inspector's initials and the results of the inspection. If corrective action or repairs are made, a summary should be included in the record (ARM 17.8.1212).
- I.18. Phillips 66 shall maintain, under Phillips 66's control, a record as required by Section III.I.12 (ARM 17.8.1212).

## Reporting

- I.19. Phillips 66 shall submit reports in accordance with 40 CFR 60.115b (ARM 17.8.340 and 40 CFR 60 Subpart Kb).
- I.20. Phillips 66 shall provide the Department copies of testing results, monitoring operations, recordkeeping, and report results, upon request of the Department or as specified under 40 CFR 60 Subpart QQQ, Sections 60.693-2, 60.696, 60.697, and 60.698, for requirements not overridden by 40 CFR 63 Subpart CC (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).
- I.21. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- I.22. The semiannual reporting shall provide (ARM 17.8.1212):
  - a. A summary of the results of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was submitted to the Department, and the results of the source tests.
  - b. Dates that Phillips 66 performed inspections on Tank #4510, #4511, #4512, and #4513 to determine integrity of the roofs, seal systems associated with the floating roofs, and vents. As inspection is required only once per year, statement that no inspection during the reporting period occurred may be within compliance for a semi-annual reporting period.
  - c. Summary of any records created as required by Section III.I.12, which shall include the date, duration, and circumstances of the deviation.
  - d. Summary of compliance with the reporting requirements of 40 CFR 60 Subpart QQQ during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 60 Subpart QQQ required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart QQQ.
  - e. Summary of compliance with the reporting requirements of 40 CFR 61 Subpart FF during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 61 Subpart FF required compliance report or compliance status determination earlier than is required by 40 CFR 61 Subpart FF.
  - f. Summary of compliance with the reporting requirements of 40 CFR 63 Subpart CC during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 63 Subpart CC required compliance report or compliance status determination earlier than is required by 40 CFR 63 Subpart CC.

## J. EU0011 – Miscellaneous Process Vents

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
J.1, J.3, J.5, J.7, J.8	Miscellaneous Process Vents	40 CFR 63 Subpart CC	40 CFR 63.644 & 645	40 CFR 63.644 & 645	40 CFR 63.654
J.2 J.4, J.6– J.8	CO Emissions - No. 1 & No. 2 H2 Units PSA Off-gas Vents	Document number and estimated emissions	Recordkeeping	Monthly	Semiannual

### Conditions

- J.1. Phillips 66 shall comply with all applicable requirements of 40 CFR 63.643 as they apply to the units required to comply with the Miscellaneous Process Vents (ARM 17.8.342 and 40 CFR 63 Subpart CC).
- J.2. Phillips 66 shall document, by month, the number of PSA off-gas venting occurrences and the estimated CO emissions from each venting occurrence, by the No.1 H<sub>2</sub> Unit PSA Off-gas Vent and the No.2 H<sub>2</sub> Unit PSA Off-gas Vent (ARM 17.8.749 and ARM 17.8.1211).

### Compliance Demonstration

- J.3. Compliance monitoring for miscellaneous process vents shall be performed in accordance with 40 CFR 63.654, 63.644, and/or 63.645, as appropriate (ARM 17.8.342 and 40 CFR 63 Subpart CC).
- J.4. Phillips 66 shall document, by month, the number of PSA off-gas venting occurrences and the estimated CO emissions from each venting occurrence by the by the No.1 H<sub>2</sub> Unit PSA Off-gas vent and the No.2 H<sub>2</sub> Unit PSA Off-gas vent. By the 30th day of each month, Phillips 66 shall total the number of PSA off-gas venting occurrences and the estimated CO emissions from each venting occurrence by each vent during the previous month. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

### Recordkeeping

- J.5. Recordkeeping for miscellaneous process vents shall be performed in accordance with 40 CFR 63.654, 63.644, and/or 63.645, as appropriate (ARM 17.8.342 and 40 CFR 63 Subpart CC).
- J.6. Phillips 66 shall maintain, under Phillips 66's control, all records required for monitoring compliance, shall make all records available to Department personnel during inspections, and shall submit the records to the Department upon request (ARM 17.8.1212).

### Reporting

- J.7. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

- J.8. The semiannual reporting shall provide (ARM 17.8.1212):
- a. A summary of the results of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was submitted to the Department, and the results of the source tests.
  - b. The number of PSA off-gas venting occurrences by month and the estimated monthly CO emissions, by the No.1 H2 Unit PSA Off-gas Vent and the No.2 H2 Unit PSA Off-Gas Vent.
  - c. Summary of compliance with the reporting requirements of 40 CFR 63 Subpart CC during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 63 Subpart CC required compliance report or compliance status determination earlier than is required by 40 CFR 63 Subpart CC.

**K. EU012 –Catalytic Reforming Units 1 & 2**

Catalytic Reforming Units #1 & #2

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirements
			Method	Frequency	
K.1, K.3, K.6, K.7, K.9, K.10	Catalytic Reforming Units	40 CFR 63 Subpart UUU	40 CFR 63 Subpart UUU	40 CFR 63 Subpart UUU	Semiannually
K.2, K.4, K.5, K.6, K.8– K.10	PM, Industrial Processes	$E = 4.10 * P^{0.67}$ or $E = 55 * P^{0.11} - 40$	Method 5	As required by the Department and Section III.A.1	

**Conditions**

- K.1. Phillips 66 shall comply with all applicable requirements of 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, including the requirement to 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. Catalytic Reforming Unit #2 is subject to the Subpart UUU requirements. Catalytic Reforming Unit #1 is not subject as long as the reformer is dormant or the catalyst is regenerated off-site (ARM 17.8.342; and 40 CFR 63 Subpart UUU).
- K.2. Phillips 66 shall not cause or authorize particulate matter to be discharged from any operation, process, or activity into the outdoor atmosphere in excess of the maximum hourly allowable emissions of particulate matter, 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 (ARM 17.8.310).

## **Compliance Demonstration**

- K.3. Phillips 66 shall meet, as applicable, the requirements of all testing and procedures of ARM 17.8.342, which reference 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, including maintaining records to document conformance with procedures in Phillips 66's required OMMP (ARM 17.8.342; and 40 CFR 63 Subpart UUU).
- K.4. In accordance with Section III.A.1 and as required by the Department, Phillips 66 shall perform Method 5 testing or other Department approved testing on the Catalytic Reforming Units 1 & 2, to monitor compliance with PM limitations in Section III.K.2 (ARM 17.8.1213).

## **Recordkeeping**

- K.5. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).
- K.6. Recordkeeping compiled for purposes of monitoring compliance with emission limits shall be retained by Phillips 66 for a minimum of 5-years (ARM 17.8.1212).
- K.7. Phillips 66 shall keep all records as required by 40 CFR 63 Subpart UUU (ARM 17.8.342 and 40 CFR 63 Subpart UUU).

## **Reporting**

- K.8. All source test reports shall be submitted to the Department in accordance with Section III.A.2 (ARM 17.8.106).
- K.9. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
- K.10. The semiannual reporting shall provide (ARM 17.8.1212):
  - a. A summary of the results of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was submitted to the Department, and the results of the source tests.
  - b. Summary of compliance with the reporting requirements of 40 CFR 63 Subpart UUU during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 63 Subpart UUU required compliance report or compliance status determination earlier than is required by 40 CFR 63 Subpart UUU.

**L. EU013 – Backup Coke Crusher (CG3810)**

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
L.1, L.2, L.3, L.4, L.5, L.6	Operational Restriction	No simultaneous operation	Recordkeeping	Ongoing	Semiannually

**Conditions**

L.1. The Coke Crusher and the Backup Coke Crusher shall not be operated simultaneously (ARM 17.8.749).

**Compliance Demonstration**

L.2. Phillips 66 shall maintain operating records demonstrating the time periods when the Coke Crusher and the Backup Coke Crusher are operated (ARM 17.8.1212). Phillips 66 shall document, annually, the number of operational hours of the Backup Coke Crusher (ARM 17.8.749).

**Recordkeeping**

L.3. All records shall be maintained on-site for a minimum of 5 years and available to the Department upon request (ARM 17.8.1212).

L.4. The records required by Section III.L.2 shall include (ARM 17.8.1212)

- a. The date and timeframe that the coke crusher operates.
- b. The date and timeframe that the backup coke crusher operates and reason that the coke crusher is not operable.

**Reporting**

L.5. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

L.6. The semiannual reporting shall provide (ARM 17.8.1212):

- a. A summary of records kept as required by Section III.L.4, which shall include the dates and timeframes that the backup coke crusher operates and reason that the coke crusher is not operable, during the reporting period.

## M. EU014 - Stationary Reciprocating Internal Combustion Engines

Backup Coke Crusher Engine  
 Cryo Backup Air Compressor Engine  
 Storm Water to Holding Pond Pump Engine  
 Boiler House Backup Air Compressor Engine

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration		Reporting Requirement s
			Method	Frequency	
M.1, M.5, M.9, M.13, M.15, M.16	40 CFR 60 Subpart IIII	40 CFR 60 Subpart IIII	40 CFR 60 Subpart IIII	40 CFR 60 Subpart IIII	Semiannually
M.2, M.2, M.10, M.14, M.15, M.16	40 CFR 63 Subpart ZZZZ	40 CFR 63 Subpart ZZZZ	40 CFR 63 Subpart ZZZZ	40 CFR 63 Subpart ZZZZ	
M.3, M.7, M.11, M.15, M.16	Max hp: Backup Coke Crusher Engine (CG3810)	300 hp (EPA Certified Tier 3 or Higher)	Recordkeeping	Ongoing	
M.4, M.8, M.12, M.15, M.16	Ultra Low Sulfur Diesel: Backup Coke Crusher Engine (CG3810)	0.0015% sulfur content	Recordkeeping	Ongoing	

### Conditions

- M.1. Phillips 66 shall comply with the applicable requirements of 40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (Coke Crusher Backup) (ARM 17.8.340 and 40 CFR 60 Subpart IIII).
- M.2. Phillips 66 shall comply with the applicable requirements 40 CFR 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (ARM 17.8.342 and 40 CFR 63 Subpart ZZZZ).
- M.3. Engine associated with CG3810 shall not exceed a horsepower rating of 300 horsepower and shall have an EPA certification of Tier 3 or higher (ARM 17.8.749).
- M.4. Phillips 66 shall use only ultra-low-sulfur diesel fuel with a sulfur content less than or equal to 0.0015% in the engine associated with CG3810 (ARM 17.8.752).

### Compliance Demonstration

- M.5. Phillips 66 shall demonstrate compliance with 40 CFR 60 Subpart IIII through the applicable monitoring and compliance requirements of 40 CFR 60 Subpart IIII, including any applicable requirements specified at 40 CFR 60.4209 and 40 CFR 60.4211 (ARM 17.8.340 and 40 CFR 60 Subpart IIII).

- M.6. Phillips 66 shall demonstrate compliance with 40 CFR 63 Subpart ZZZZ through the applicable compliance requirements of 40 CFR 63 Subpart ZZZZ, including any applicable requirements in the tabulated initial and continuous compliance requirements of Table 5 and Table 6 of 40 CFR 63 Subpart ZZZZ, respectively (ARM 17.8.342 and 40 CFR 63 Subpart ZZZZ).
- M.7. Phillips 66 shall demonstrate compliance with the horsepower rating and EPA certification limitations of Section III.M.3 by keeping records of manufacturer specification sheets demonstrating maximum rated horsepower and EPA Tier 3 specification (ARM 17.8.1212).
- M.8. Phillips 66 shall document, annually, the maximum sulfur content of the diesel fuel used by the engines for the previous calendar year. Vendor specifications or certification that the fuels met the maximum sulfur content allowed by the motor fuel regulations (40 CFR Part 80) will satisfy this requirement (ARM 17.8.749).

### **Recordkeeping**

- M.9. Phillips 66 shall comply with the applicable recordkeeping requirements of 40 CFR 60 Subpart IIII including any applicable recordkeeping requirements specified at 40 CFR 60.4214 (ARM 17.8.340 and 40 CFR 60 Subpart IIII).
- M.10. Phillips 66 shall comply with the applicable reporting requirements of 40 CFR 63, Subpart ZZZZ including any applicable requirements of 40 CFR 63.6655 (ARM 17.8.342 and 40 CFR 63 Subpart ZZZZ).
- M.11. Phillips 66 shall maintain the engine specification sheet records for the engine on-site for the duration of the stay of the engine on-site. For any engine no longer on-site, Phillips 66 shall maintain records of the specification sheets of the engine(s) previously on-site for a minimum of 5 years from the date the engine was removed. The records shall indicate the dates the engine(s) were on-site (ARM 17.8.1212).
- M.12. The records required by Section III.M.8 shall be maintained on-site for a minimum of 5 years (ARM 17.8.1212).

### **Reporting**

- M.13. Phillips 66 shall comply with the applicable notification and reporting requirements of 40 CFR 60 Subpart IIII including any applicable notification and reporting requirements specified at 40 CFR 60.4214 .
- M.14. Phillips 66 shall comply with the applicable notification and reporting requirements of 40 CFR 63 Subpart ZZZZ, including any applicable requirements of 40 CFR 63.6650.
- M.15. The semiannual reporting shall provide (ARM 17.8.1212):
  - a. Statement of demonstration methodology regarding the maximum sulfur content of diesel fuel fired in the engines.
  - b. Statement of any engine associated with CG3810 which was or is located on-site and which does not have engine specification sheets located on-site.

- c. Summary of compliance with the reporting requirements of 40 CFR 60 Subpart IIII during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 60 Subpart IIII required compliance report or compliance status determination earlier than is required by 40 CFR 60 Subpart IIII.
- d. Summary of compliance with the reporting requirements of 40 CFR 63 Subpart ZZZZ during the semi-annual period. This reporting requirement does not require the permittee to submit any 40 CFR 63 Subpart ZZZZ required compliance report or compliance status determination earlier than is required by 40 CFR 63 Subpart ZZZZ.

M.16. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

## SECTION IV. NON-APPLICABLE REQUIREMENTS

Air Quality Administrative Rules of Montana (ARM) 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). The following list does not preclude the need to comply with any new requirements that may become applicable during the permit term.

### A. Facility-Wide

The following table contains non-applicable requirements which are administrated by the Air Resources Management Bureau of the Department of Environmental Quality.

Rule Citation	Reason
ARM 17.8.320, ARM 17.8.321, ARM 17.8.323, ARM 17.8.331, ARM 17.8.332, ARM 17.8.333, and ARM 17.8.334.	These rules are not applicable because the facility is not listed in the source category cited or does not have the specific emissions unit cited in the rules.
40 CFR 60, Subparts B, C, Ca, Cb 40 CFR 60, Subparts E-I 40 CFR 60, Subparts L-Z 40 CFR 60, Subparts AA-EE 40 CFR 60, Subparts GG-HH 40 CFR 60, Subparts KK-NN 40 CFR 60, Subparts PP-TT 40 CFR 60, Subparts WW 40 CFR 60, Subparts AAA- DDD 40 CFR 60, Subparts FFF 40 CFR 60, Subparts HHH-LLL 40 CFR 60, Subparts NNN-PPP 40 CFR 60, Subparts RRR-WWW	These requirements are not applicable because the facility is not an affected source as defined in these regulations.
40 CFR 61, Subparts B-F 40 CFR 61, Subparts H-L 40 CFR 61, Subparts N 40 CFR 61, Subparts O-R 40 CFR 61, Subpart T 40 CFR 61, Subparts V-W 40 CFR 61, Subpart Y 40 CFR 61, Subpart BB	These requirements are not applicable because the facility is not an affected source as defined in these regulations.
40 CFR 63, Subparts F-I 40 CFR 63, Subparts L-O 40 CFR 63, Subpart Q 40 CFR 63, Subpart T-Y 40 CFR 63, Subparts DD-EE 40 CFR 63, Subpart GG	These requirements are not applicable because the facility is not an affected source as defined in these regulations.
40 CFR 82, Subparts A-E 40 CFR 82, Subparts G-H	These requirements are not applicable because the facility is not an affected source as defined in these regulations.
40 CFR 72 through 40 CFR 78.	These requirements are not applicable because the facility is not an affected source as defined by the acid rain regulations.

## **B. Emissions Units**

The permit application identified applicable requirements: non-applicable requirements for individual or specific emissions units were not listed. The Department has listed all non-applicable requirements in Section IV.A, these requirements relate to each specific unit, as well as facility wide.

## 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).
  - 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 Environmental Protection Agency, 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 Sec. 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 Sec. 7651g(a) of the FCAA.

- d. The ability of the administrator to obtain information from a source pursuant to Sec. 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.
  - 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.
  - 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 to the Department within the following timeframes (unless otherwise specified in an applicable requirement):

1. For deviations which may result in emissions potentially in violation of permit limitations:
  - a. An initial phone notification (or faxed or electronic notification) describing the incident within 24 hours (or the next business day) of discovery.
  - b. A follow-up written, faxed, or electronic report within 30 days of discovery of the deviation that describes the probable cause of the reported deviation and any corrective actions or preventative measures taken.
2. For deviations attributable to malfunctions, deviations shall be reported to the Department in accordance with the malfunction reporting requirements under ARM 17.8.110.
3. For all other deviations, deviations shall be reported to the Department via a written, faxed, or electronic report within 90 days of discovery (as determined through routine internal review by the permittee).

Prompt deviation reports do not need to be resubmitted with regular semiannual (or other routine) reports, but may be referenced by the date of submittal.

## **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.
  - 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.
  - 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 Montana Air Quality Permit 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.
  - 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.
  - 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.
  - 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)

1. This permit may be reopened and revised under the following circumstances:
  - a. 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).
  - b. 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.

- c. 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.
- d. 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 Montana Air Quality Permit (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 potential to emit more than 5 tons per year may not be artificially split into smaller projects to avoid Montana Air Quality Permitting.
  - 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, Part 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, Part 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, Part 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 EMISSIONS UNITS

**Disclaimer:** The information in this appendix is not state or federally enforceable, but is presented to assist Phillips 66, the permitting authority, inspectors, and the public. Pursuant to ARM 17.8.1201(22)(a), an insignificant emission unit means any activity or emissions unit located within a source that: (i) has a potential to emit less than five tons per year of any regulated pollutant; (ii) has a potential to emit less than 500 pounds per year of lead; (iii) has a potential to emit less than 500 pounds per year of hazardous air pollutants 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:** ConocoPhillips provided an update to the June 12, 1996 application on May 3, 2000 in which all references to insignificant sources were either moved to significant units or deleted from the previous list.

## 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 Phillips 66.
- (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.
- (f) incorporates any other type of change which 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 emissions 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.
- (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.

**"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 52.21 or under regulations approved pursuant to 40 CFR 51, Subpart I, including operating permits issued under an EPA 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 emissions 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 Montana Air Quality Permit 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.
- (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).
  - (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
BDT	bone dry tons
BTU	British Thermal Unit
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
gr	grains
HAP	hazardous air pollutant
IEU	insignificant emissions unit
Mbdft	thousand board feet
Method 5	40 CFR 60, Appendix A, Method 5
Method 9	40 CFR 60, Appendix A, Method 9
MMbdft	million board feet
MMBTU	million British Thermal Units
NO <sub>x</sub>	oxides of nitrogen
NO <sub>2</sub>	nitrogen dioxide
O <sub>2</sub>	oxygen
Pb	lead
PM	particulate matter
PM10	particulate matter less than 10 microns in size
psi	pounds per square inch
scf	standard cubic feet
SIC	Source Industrial Classification
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	oxides of sulfur
tpy	tons per year
U.S.C.	United States Code
VE	visible emissions
VOC	volatile organic compound

## Appendix C NOTIFICATION ADDRESSES

### 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. 15<sup>th</sup> 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 Phillips 66, permitting authority, inspectors, and the public.

1. **Direction to Plant:** 401 South 23<sup>rd</sup> Street, Billings Montana, 59103
2. **Safety Equipment Required:** Phillips 66 has an extensive safety orientation package that inspectors and/or visitors must participate in.  
A safety video must be watched. Electronic Temporary Identification Cards are issued. Safety equipment such as fire-retardant coats, safety glasses, ear plugs, H<sub>2</sub>S monitors are all available for visitors. Steel-toed boots are optional but recommended when on site. Substantial footwear is required.
3. **Facility Plot Plan:** A facility plot plan was submitted with the original application on June 12, 1996.

## Appendix E June 12, 1998 Board Order Adopting an SO<sub>2</sub> Control Plan

The June 12, 1998 Board Order Adopting and SO<sub>2</sub> Control Plan remain as applicable requirements as stated in the Title V Operating Permit OP2619-02. To receive a hard copy of this appendix, please contact:

Montana Department of Environmental Quality  
Permitting and Compliance Division  
Air Quality Bureau  
1520 E. Sixth Ave.  
P.O. Box 200901  
Helena, Montana 59620-0901  
Bureau Phone #: (406) 444-3490

## Appendix F CAM Plan for Jupiter Sulfur Plant

## Compliance Assurance Monitoring Plan

### Jupiter Sulfur Plant, Billings MT

ConocoPhillips Billings Refinery, #OP2619-01

#### Particulate Filters for SRU/ATS Stack Effluent for PM-10 Control

The ConocoPhillips Billings Refinery (COP) and the Billings Jupiter Sulfur Plant have developed this Compliance Assurance Monitoring Plan (CAM Plan) for the particulate filters on the SRU/ATS process at the Jupiter Sulfur Plant located in Billings, Montana. The Jupiter Sulfur Plant in Billings is part of the COP Billings Refinery state preconstruction permit (currently #2619-21) and the COP Billings Refinery Title V Permit (#OP2619-01). The manager of the Billings Jupiter Sulfur Plant reports to the manager of the COP Billings Refinery, who is designated as the Responsible Official (RO) for the Title V permit.

A CAM Plan has been determined to be required for the particulate filters on the Billings Jupiter Sulfur Plant SRU/ATS process under the Montana CAM rule located in ARM Title 17, Chapter 8, Subchapter 15. This rule applicability is due to the following factors:

- The source (SRU/ATS process) is subject to a Title V permit.
- The source is subject to an emission limit (PM-10, particulate matter less than 10 microns in diameter) that is federally-enforceable
- The source has potential PM-10 emissions greater than major source thresholds.
- The source uses a control device that is not inherent to the production process as the means to control PM-10 emissions
- The PM-10 emissions are not subject to emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to Section 111 (NSPS) or Section 112 (NESHAP/MACT) of the Clean Air Act
- The Part 70 permit (#OP2619-01) does not currently specify a continuous compliance determination method for PM-10 from the SRU/ATS stack

The SRU portion of the plant (Sulfur Recovery Unit) and the ATS portion of the plant (Ammonium Thiosulfate unit) are each equipped with two gas filters prior to discharging to the SRU/ATS stack. Because both portions of the plant are each equipped with two gas filters, a malfunctioning gas filter can be isolated and serviced while the process unit remains on-line.

The SRU/ATS stack has a PM-10 emission limit of 34.00 ton/yr, 186.3 lb/day, and 7.76 lb/hr (Condition H.7. of #OP2619-01). The SRU/ATS stack is due to be tested for PM-10 in late 2007. The most recent PM-10 test on the SRU/ATS stack was in October 2002. The average of the three test runs showed PM-10 emissions of 1.72 lb/hr. These results are well below the Title V permit limit of 7.76 lb/hr.

CAM Plan, 1/8/07

#OP2619-01

Compliance with the PM-10 emission limit contained within the ConocoPhillips Billings Refinery Title V permit for the Jupiter Sulfur ATS/SRU stack will be maintained by observing the pressure drop across the particulate filters. The pressure drop data will be recorded in the facility's Plant Information (PI) data management system, which will also provide for archiving of data.

Plant experience has shown that when the pressure drop across the Jupiter particulate filters decreases suddenly, a malfunction has likely occurred in one or more of the particulate filters. Previous particulate filter malfunctions have occurred when the filter medium is physically damaged or ruptured, such that the damage allows the process effluent stream to bypass the filter medium. When this occurs, the pressure drop across the filter medium decreases significantly and quickly.

When the data indicate that a pressure drop decrease has occurred that is outside the normal range of pressure drop data variability, the Jupiter operations personnel will make a visual observation of the SRU/ATS stack plume for confirmation of a particulate filter malfunction.

If the visual observation of the SRU/ATS stack plume confirms that a malfunction of the particulate filter has occurred, operations personnel must immediately begin to gather information for the purposes of diagnosing and correcting the cause of the malfunction. In addition, operations must, to the extent practicable, take steps to minimize emissions during these periods of particulate filter malfunction.

If the lack of ambient light and/or extremely cloudy conditions preclude the visual confirmation of a particulate filter malfunction, operations is to proceed under the assumption that a particulate filter malfunction has occurred, and must continue to gather information for the purposes of diagnosing and correcting the cause of the malfunction. In addition, operations must, to the extent practicable, take steps to minimize emissions during these periods of particulate filter malfunction or suspected particulate filter malfunction.

When the above-described malfunction or suspected malfunction occurs on the Jupiter particulate filters, the Jupiter operations personnel are to follow prescribed communication steps, which are outside the scope of this document.

CAM Plan, 1/8/07

#OP2619-01

## Appendix G Alternate Operating Scenario - GOHDS Outage Plan

# **Gas Oil Hydrotreater Outage Plan**

Revision 5.1  
March 15, 2006

**ConocoPhillips  
Billings Refinery**

Billings, Montana

15-Mar-06  
Version 5

### **Introduction**

In accordance with the Consent Decree between Conoco Inc. and the United States and certain States (Civil Action H-01-4430, as amended and entered on August 2, 2003), Conoco (now ConocoPhillips) submitted Gas Oil Hydrotreater (GOH) outage plans for the Billings Refinery to minimize emissions of NO<sub>x</sub> and SO<sub>2</sub> during GOH outages from the FCC unit. These were submitted to the EPA on June 17, 2002. The EPA responded in a letter dated March 1, 2005 that the plan did not meet their approval. The following GOH outage plan is submitted to address EPA comments and replaces the plan submitted previously.

SO<sub>2</sub> and NO<sub>x</sub> emissions from an FCCU primarily result from organic sulfur and nitrogen compounds in the FCCU feedstock. Hydrotreating the FCCU feed reduces the quantity of sulfur and nitrogen to the FCCU, thus potentially lowering the emissions of SO<sub>2</sub> and NO<sub>x</sub>. Because FCC Feed GO Hydrotreaters do not have 100% on stream efficiency, ConocoPhillips and EPA have agreed to a program to minimize FCCU emissions as much as practicable during GOH outages.

Paragraphs 27 and 41 of the Consent Decree stipulate that short-term NO<sub>x</sub> and SO<sub>2</sub> emission limits do not apply during GOH outages provided that ConocoPhillips:

- Maintain and operate the Billings Refinery FCCU in a manner consistent with good air pollution control practices for minimizing emissions during a GOH outage, and;
- Submit a plan for EPA approval that describes the steps that the Billings Refinery will take to minimize FCCU emissions in the event of a planned or unplanned GOH outage.
- Follow the submitted plan

Under the provisions of Paragraphs 27 and 41, ConocoPhillips reserves the right to propose alternative emissions limits and/or the exclusion of the NO<sub>x</sub> and SO<sub>2</sub> emissions during periods of GOH outages in the 365-day rolling average limit as part of the limit setting process in the Consent Decree.

For the purposes of this plan, a GOH outage or "Hydrotreater Outage" shall mean the period of time during which the operation of an FCCU is affected as a result of catalyst change-out operations or shutdowns required by ASME pressure vessel requirements or state boiler codes, or as a result of Malfunction, that prevents the hydrotreater from effectively producing the quantity and quality of feed necessary to achieve established FCCU emission performance. For purposes of this plan, a "planned outage" is one that is scheduled at least six months prior to a shutdown of the GOHDS unit and an "unplanned outage" is one that is either immediate or is scheduled for shutdown less than six months in advance.

ConocoPhillips has a strong incentive to plan GOH unit shutdowns properly due to the negative impact on FCCU yields and fuel specifications. As such, the Billings Refinery is motivated to minimize the impact of these events.

### **General Process Description**

#### **Sour Gas Oil – GOH Feedstock**

Atmospheric gas oil is derived from crude distillation in the Billings Refinery's two Crude Units, vacuum gas oil is one of the products of the Vacuum Distillation Unit, and coker gas

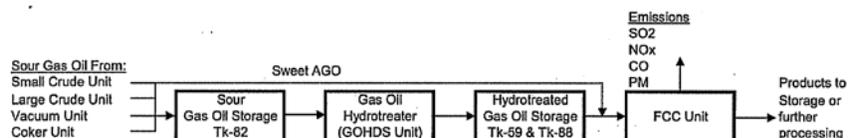
oil is obtained from the Coker Unit. Most of these gas oils are "sour" and contain relatively more sulfur than virgin gas oil derived from 100% sweet crude. The sour gas oils from the various sources are stored in the sour gas oil storage tank(s) and are the feedstock to the GOH unit. In general, sour gas oil storage is limited to one tank.

The GOH unit in the Billings Refinery is the No.4 Gas Oil Hydrotreater or GOHDS unit. The gas oil feeds to the GOHDS unit include virgin gas oils from the crude topping and vacuum units as well as coker gas oil from the Coker Unit. The GOHDS Unit uses catalytic hydrotreating technology to improve the quality of the FCC feed by removing sulfur, nitrogen, and organo-metallic compounds from sour feedstock and improving its cracking characteristics. The resulting GOHDS product is stored in hydrotreated gas oil storage tanks (Tk-59 & Tk-88) and make up most of the fresh feed to the FCCU. See Figure 1, the Billings Refinery Gas Oil System.

#### Sweet Gas Oil – FCC Feedstock

The Billings Refinery normally processes a blend of crudes; from sweet to sour, light to heavy. The sweetest gas oil (with the lowest sulfur) is the Small Crude Unit atmospheric gas oil (sweet AGO). This gas oil is routed directly to the FCC and normally makes up the remainder of fresh feed to the FCCU, as shown in Figure 1.

Figure 1  
Block Flow Diagram - Billings Refinery Gasoil System



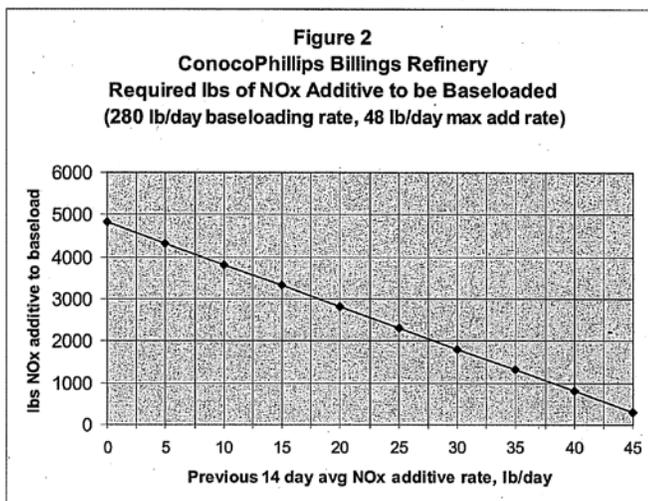
#### Other Feeds

Recently, the FCC has only processed hydrotreated gas oil and Small Crude Unit atmospheric gas oil as fresh feed. However, the FCC has processed sweet resid and various diesel-type streams in the past. If necessary, these feed streams may again need to be processed in the FCC if Refinery operation dictates. All emission permit limits will still be met while processing these "other" fresh feeds.

#### GOH Outage Plan

1. During the hydrotreater outage, the refinery can choose to continue to comply with the short term NOx and SO<sub>2</sub> short term limits established under the Consent Decree or alternatively under the terms of this GOH Outage Plan.
2. Planned GOH outages will be conducted concurrently with planned FCCU turnarounds to the extent practicable.

required baseloading prior to the start of any planned HDT Outage, or within 24 hours of the start of any unplanned HDT Outage, and shall maintain the maximum NOx addition rate for the entire HDT Outage. If the increased usage of NOx additive interferes with the effectiveness of the SO<sub>2</sub> reducing additive, COP may reduce NOx additive rate to a point where such interference does not exist and COP will notify EPA of such interference as soon as practicable. If COP demonstrates that the NOx additive interferes with the SO<sub>2</sub> additive, the COP may request, and EPA may approve a modification to this NOx additive requirement during HDT outages.



7. To the extent that the Billings Refinery normally utilizes a low-NOx combustion promoter to minimize NOx emissions, the refinery shall continue to use such promoter during all GOH outages under the same conditions and constraints as for normal operation.
8. If either the SO<sub>2</sub> or NOx short term emission limits as determined per Consent Decree requirements are exceeded during a GOH outage, or if the GOH outage occurs during the NOx reducing catalyst additive demonstration period, then a report will be submitted to the EPA within 60 days after the end of the GOH outage. The report will identify the periods of time that the GOH outage plan applied rather than the short term limits, and describe the steps taken to comply with the GOH outage plan. The report will include data (compiled on a daily average basis) necessary to document that each requirement of the plan was implemented, and also include SO<sub>2</sub> and NOx stack concentration and mass rate emission data.

## **Appendix H Summary of Terms and Conditions from the Consent Decree**

The following summary of terms and conditions are from the Consent Decree (United States of America et al v. Conoco Inc., Civil Action H-01-4430 (Southern District of Texas, April 30, 2002 – updated to reflect the Phillips 66 Company Name). Although they are not terms and conditions of this Operating Permit, these terms and conditions may be enforced by the State of Montana and the United States Environmental Protection Agency pursuant to the provisions of the Consent Decree. These requirements are effective per the terms of the Consent Decree until Consent Decree termination and are summarized below.

### **FCCU Provisions**

Pursuant to Paragraphs 8-30 for NO<sub>x</sub> emissions, Phillips 66 was required to implement a multi-year program to evaluate the effectiveness of certain additives in reducing NO<sub>x</sub> emissions from the Billings Refinery FCCU. All portions of the NO<sub>x</sub> additive program have been implemented and the U.S. EPA and the refinery have verbally agreed on final NO<sub>x</sub> limits. The agreed upon NO<sub>x</sub> limits were included within Operating Permit #OP2619-06.

Program requirements to establish FCCU SO<sub>2</sub> limits are also contained in the Consent Decree. (Paragraphs 31-41) Implementation of these requirements has resulted in final SO<sub>2</sub> limits which have been incorporated as final limits in the Title V permit.

Where the Consent Decree required the acceptance of a specific limit (i.e., for PM and CO) and/or CEMS installations, these limits have been incorporated specifically within the Title V permit and are not referenced in this Appendix.

### **Heater and Boiler Provisions**

Phillips 66 Company is required by the Consent Decree to realize SO<sub>2</sub> reductions from heaters and boilers across the Billings, Lake Charles and Ponca City refineries [Paragraphs 55(a)-68]. The Consent Decree allows COPC to determine where it would make such reductions so long as at least 30% of the fired duty of any given refinery was “controlled” as defined by the Consent Decree (Paragraphs 59 and 60). Reductions were realized at the Billings Refinery by the shutdown and dismantling of Heater H-1, pre-existing Boiler 5 and pre-existing Boiler 6. (Any references in the Title V permit to Boilers 5 and 6 are to new, different boilers.) Another heater, H-9401, is equipped with ultra-low NO<sub>x</sub> burners (ULNB). The shutdowns and the existence of the ULNB on H-9401 satisfied Phillips 66’s requirements that 30% of its firing capacity as it existed in 1999 at the Billings Refinery has been controlled. (Paragraphs 59 and 60). Requirements to properly operate and measure emissions from H-9401 are included in the Title V permit.

### **Sulfur Recovery Plant Optimization**

During the life of the Consent Decree, Phillips 66 shall continue to maintain its Phillips 66 Sulfur Processing Best Practices Network as a means to optimize sulfur plant operations throughout the company including at the Billings Refinery (Paragraph 176). The network, at a minimum, will review:

- (a) operator and engineer training for SRP and amine treating operations;
- (b) operating parameters, material balances and efficiencies;
- (c) acid gas and SWS gas composition;
- (d) operating problems and corrective actions;

- (e) incremental improvements achieved;
- (f) new or modified operating procedures; and
- (g) root cause and corrective action performed as a result of any incident investigation performed as a result of an Acid Gas Flaring Incident or Tail Gas Flaring Incident.

### **Control of Acid Gas Flaring Incidents and Tail Gas Incidents**

Phillips 66 shall implement procedures for evaluating whether future Acid Gas Flaring Incidents and Tail Gas Incidents are due to Malfunctions. The procedures shall require a Root Cause Failure Analysis and Corrective Action for flaring incidents as specified in the Consent Decree, and require stipulated penalties for Acid Gas Flaring Incidents or Tail Gas Incidents if the Root Causes were not due to Malfunctions.

#### Flaring Incidents Investigation and Reporting (Paragraph 183)

No later than forty-five (45) days following the end of an Acid Gas Flaring Incident, Tail Gas Incident or HC Flaring Incident (individually and collectively referred to as Flaring Incident), Phillips 66 shall prepare a report that sets forth the information listed in paragraph 183 of the Consent Decree.

#### Corrective Action (Paragraphs 184 - 188)

In response to any Acid Gas Flaring Incident, Tail Gas Incident or HC Flaring Incident, Phillips 66 shall take, as expeditiously as practicable, such interim and/or long-term corrective actions, if any, as are consistent with good engineering practice to minimize the likelihood of a recurrence of the Root Cause and all contributing causes of the subject incident.

If EPA and/or Montana DEQ do not notify Phillips 66 in writing within 30 days of receipt of the report(s) required by Paragraph 183 that they object to one or more aspects of Phillips 66's proposed corrective action(s), if any, and schedule(s) of implementation, if any, then that (those) action(s) and schedule(s) shall be deemed acceptable for purposes of compliance with Paragraph 185 of the Consent Decree.

EPA and Montana DEQ do not, however, by their agreement to the entry of the Consent Decree or by their failure to object to any corrective action that Phillips 66 may take in the future, warrant or aver in any manner that any of Phillips 66's corrective actions in the future will result in compliance with the provisions of the Clean Air Act, Montana Clean Air Act or their implementing regulations. Notwithstanding EPA's review of any plans, reports, corrective measures or procedures under Section J of the Consent Decree, Phillips 66 shall remain solely responsible for compliance with the federal Clean Air Act, Montana Clean Air Act or their implementing regulations. Nothing in Section J of the decree shall be construed as a waiver of EPA's rights under the Clean Air Act and its regulations for future violations of the Act or its regulations nor to limit Phillips 66's right to take such corrective action as it deems necessary and appropriate immediately following a Flaring Incident or in the period during preparation and review of any reports required under Part X of the Consent Decree.

If the EPA does object, in whole or in part, to Phillips 66's proposed corrective action(s) and/or its schedule(s) of implementation, or, where applicable, to the absence of such proposal(s) and/or schedule(s), it shall notify Phillips 66 of that fact within thirty (30) days following receipt of the report(s) required by Paragraph 183.

Nothing in Subsection J of the decree shall be construed to limit the right to take such corrective actions as it deems necessary and appropriate immediately following an Acid Gas Flaring incident or in the period during preparation and review of any reports required under this section of the Consent Decree.

Tail Gas Incidents – Investigation, Reporting, Corrective Action and Stipulated Penalties.  
(Paragraph 181 and 182)

For future Tail Gas Incidents, Phillips 66 shall follow the same investigative, reporting, corrective action and assessment of stipulated penalty procedures as those outlined for Acid Gas Flaring Incidents. Those procedures shall be applied to TGTU shutdowns, bypasses of a TGTU, unscheduled shutdowns of a Sulfur Recovery Plant, or other miscellaneous unscheduled Sulfur Recovery Plant events which results in a Tail Gas Incident.

**Control of Hydrocarbon Flaring Incidents**

For future Hydrocarbon Flaring Events, Phillips 66 shall follow the same investigative and corrective action procedures as those outlined for Acid Gas Flaring Incidents; except that Phillips 66 shall only be required to submit such information to EPA and Montana DEQ in the Quarterly Reports required under Paragraph 183a. Stipulated penalties do not apply to Hydrocarbon Flaring Events.

**Benzene Waste Operations NESHAP Program Enhancements**

Refinery Compliance Status (Paragraphs 76-77)

Phillips 66's Billings Refinery is complying with the 6 BQ compliance option as set forth at 40 CFR 61.342(e). The Billings Refinery may not change its compliance option from the 6 BQ compliance option to the 2 Mg compliance option.

Review and Verification of TAB and Compliance with 6 BQ Compliance Option (Paragraphs 78 - 80)

On September 30, 2002, Phillips 66' Billings Refinery submitted its BWON Compliance Review and Verification Report. This report identified the facility's waste streams, TAB calculations, benzene concentrations and control status as required by Paragraph 78(a) through (d). EPA did not require any additional sampling or studies.

Waste/Slop Oil Management (Paragraph 81)

On Dec. 5, 2002, the Billings Refinery submitted its waste/slop oil management plan. This plan was approved by EPA on October 28, 2003.

Carbon Canisters Paragraphs 87-96)

The Billing Refinery is required to comply with specific requirements for the use of carbon canisters as BWON control devices. Generally, dual canisters operating in series are required and the secondary canister must be replaced upon breakthrough.

### Annual Review (Paragraph 97)

Phillips 66 must annually review refinery process and project to ensure that all new benzene waste streams are included in the Billings Refinery's waste stream inventory during the life of the Consent Decree.

### Laboratory Audits (Paragraphs 98-100)

Phillips 66 shall conduct audits of all laboratories that perform analyses of Phillips 66's benzene waste operations NESHAP samples to ensure that proper analytical and quality assurance/quality control procedures are followed. These audits may be conducted by either Phillips 66 personnel or third parties. Phillips 66 may rely upon audit results obtained by another company that has similar audit requirements if that company has audited the same laboratory within the past twelve (12) months. Phillips 66 shall audit any new laboratory used for analyses of benzene samples prior to use of the new laboratory. During the life of the Consent Decree, Phillips 66 shall conduct subsequent laboratory audits, such that each laboratory is audited every two (2) years.

### Spills (Paragraph 101)

Phillips 66 shall review reportable spills at the Billings Refinery to determine if benzene waste, as defined under Subpart FF, was generated. For the purposes of this review, reportable will be the smaller of the benzene quantity defined as reportable by either CERCLA or the State in which the particular refinery operates. Phillips 66 shall account for such benzene waste in the TAB for the Billings Refinery as required by 40 CFR 61.342.

### Training (Paragraphs 102-105)

Phillips 66 shall conduct annual (i.e.: once each calendar year) training for all employees asked to draw benzene waste samples. Training specific to the Refinery's BWON equipment and operating procedures is required every three years. Contractors are responsible for training their own employees. If personnel are employees of contractors, the contractor will provide their employees' training information to Phillips 66.

### End of Line Sampling (6 BQ Compliance Option) (Paragraphs 108-110)

The Billings Refinery submitted a sampling plan on December 5, 2002. This plan was approved on October 28, 2003. Per the plan, the refinery conducts quarterly sampling at specified points throughout the refinery and of all uncontrolled streams to estimate compliance with the annual TAB limit.

### Quarterly Estimations of Annual TAB (Paragraphs 115-116)

Using data collected per the sampling plan (Paragraph 108-110) Phillips 66 shall calculate a quarterly and estimate a calendar year value. If either the quarterly calculation made pursuant to Paragraph 115 exceeds 1.5 mg or the annual estimate exceeds 6 BQ, then Phillips 66 shall prepare a written summary and schedule of the activities planned to minimize benzene wastes for the rest of the calendar year to ensure that the calendar year calculation complies with the 6 BQ compliance option. The summary and schedule are due no later than sixty (60) days after the close of the quarter in which the quarterly calculation exceeded the applicable quantity.

#### Miscellaneous Measures (paragraph 117)

The Billings Refinery is required to implement certain measures to enhance its compliance with the BWON requirements. These measures include additional visual inspections of water traps in the individual drain systems, vents on process sewers and the oil-water separators. Additionally, all segregated storm water drains must be marked as such,

#### Recordkeeping and Reporting Requirements (Paragraph 131)

In addition to the reports required under 40 CFR 61.537, the facility must submit the various reports and calculations noted above. These additional reports are due, as noted in the Consent Decree, either by the date specified in the Consent Decree or with the Progress Reports required under the Consent Decree.

#### **Leak Detection and Repair (“LDAR”) Program Enhancements**

The following requirements are enhancements to the existing refinery LDAR program. The existing refinery LDAR program includes the requirements of 40 CFR Part 60 Subpart GGG and VV; Part 61, Subparts J and V; and Part 63 Subparts F, H and CC and applicable state LDAR requirements.

#### Written Refinery-Wide LDAR Program (Paragraph 126)

Phillips 66 shall maintain a written refinery-wide program for compliance with all applicable federal and state LDAR regulations. Until termination of this Decree, Phillips 66 shall implement the program on a refinery-wide basis and update the program as necessary to ensure continuing compliance. The refinery-wide program shall include the items listed in Paragraph 126 of the Consent Decree.

#### Training (Paragraph 127)

Phillips 66 shall maintain the training program described in Paragraph 127 of the Consent Decree.

#### Valves Not Included in the Monitoring Program as of 9/30/03 (Paragraph 140.a.)

Phillips 66 shall monitor valves in light-liquid and/or gaseous service which were not included in the existing refinery LDAR program at least annually, shall repair leaks identified under this subparagraph in accordance with the requirements of other, regulated valves, and shall maintain all records for valves monitored and repaired under this subparagraph in accordance with the requirements of other, regulated valves.

#### LDAR Audits (Paragraphs 128-131)

Phillips 66 shall implement refinery-wide LDAR audits as set forth in Paragraphs 129-130 of the Consent Decree to ensure the refinery’s compliance with all applicable LDAR requirements. The audits shall include but not be limited to, comparative monitoring, records review, tagging, data management and observation of the LDAR technicians’ calibration and monitoring techniques. An audit of the refinery shall occur every two years and, shall alternate between third party led audits and Phillips 66’s led audits. As an alternative to the Phillips 66’s led audits, Phillips 66 may elect to retain third parties to undertake these audits.

### Actions Necessary to Correct Non-Compliance (Paragraph 132-133)

If the results of any of the audits identify any areas of non-compliance, Phillips 66 shall implement, as soon as practicable, all steps necessary to correct the area(s) of non-compliance, and to prevent, to the extent practicable, a recurrence of the cause of the non-compliance. Until two (2) years after the termination of the Consent Decree, Phillips 66 shall retain the audit reports generated pursuant to Paragraphs 129-130 of the Consent Decree and shall maintain a written record of the corrective actions that Phillips 66 takes in response to any deficiencies identified in any audits. In the quarterly report submitted pursuant to the provisions of Part XIV of the Consent Decree (Recordkeeping and Reporting) for the first calendar quarter of each year, Phillips 66 shall report on the audits and corrective actions for audits performed during the previous year.

### Internal Leak Definition for Valves and Pumps (Pumps (Paragraphs 134-135)

The permittee shall utilize the following internal leak definitions, unless other permit(s), regulations, or laws require the use of lower leak definitions.

Leak Definition for Valves: 500 ppm VOCs for all valves in light liquid and/or gas vapor service, excluding pressure relief devices.

Leak Definition for Pumps: 2,000 ppm for pumps in light liquid and/or gas/vapor service.

### Reporting, Recording, Tracking, Repairing and Re-monitoring Leaks of Valves and Pumps Based on the Internal Leak Definitions (Paragraphs 137-138)

Reporting: For regulatory reporting purposes, Phillips 66 may continue to report leak rates in valves and pumps against the applicable regulatory leak definition, or may use the lower, internal leak definitions specified in paragraphs 135 and 136. The permittee will identify in the report which definition is being used.

Recording, Tracking, Repairing and Re-monitoring Leaks: Phillips 66 shall record, track, repair and re-monitor applicable leaks in excess of the internal leak definitions of paragraphs 135 and 136 (at such time as those definitions become applicable), except that Phillips 66 shall have 30 days to make repairs and re-monitor leaks that are greater than the internal leak definitions but less than the applicable regulatory leak definitions.

### First Attempt at Repairs on Valves (Paragraph 139)

Phillips 66 shall promptly make a “first attempt at repair” on any valve that has a reading greater than 200 ppm of VOCs excluding valves, pumps and components that LDAR personnel are not authorized to repair. The timing for the “first attempt at repair” of those components which monitoring personnel are not authorized to repair will be consistent with the existing regulatory requirements. “First attempt at repair” will be made promptly (no later than next business day) for the valves over 200 ppm that the LDAR monitoring personnel are authorized to attempt repair. The “first attempt at repair” will be re-monitored no later than four business days following the repair to assure the leak is not worse. No other action will be required unless the leak exceeds the then-applicable leak definition.

### LDAR Monitoring Frequency (Paragraph 140-141)

Pumps: When the lower leak definition for pumps becomes applicable pursuant to Paragraph 136, Phillips 66 shall monitor pumps in light liquid and/or gas/vapor service at the lower leak definition on a monthly basis.

Valves: Unless more frequent monitoring is required by state regulation when the lower internal leak definition for valves becomes applicable pursuant to paragraph 135, Phillips 66 shall monitor valves in light liquid and/or gas vapor service – other than difficult to monitor or unsafe to monitor valves – on a quarterly basis, with no ability to skip periods on a process-unit-by-process-unit basis.

### Electronic Monitoring, Storing, and Reporting of LDAR Data (Paragraphs 142-143)

Electronic Storing and Reporting of LDAR Data: Phillips 66 has and will continue to maintain for the duration of this Consent Decree an electronic database for storing and reporting LDAR data.

Electronic Data Collection During LDAR Monitoring: For the duration of this Consent Decree, Phillips 66 shall continue to use data loggers and/or electronic data collection devices during LDAR monitoring. Phillips 66, or its designated contractor, shall use its/their best efforts to transfer, on a daily basis, electronic data from electronic data logging devices to the electronic database of Paragraph 142. For all monitoring events in which an electronic data collection device is used, the collected monitoring data shall include a time and date stamp, and instrument and operator identification. Phillips 66 may use paper logs where necessary or more feasible (e.g., small rounds, re-monitoring, or when data loggers are not available or broken), and shall record, at a minimum, the identification of the technician undertaking the monitoring, the date, and the identification of the monitoring equipment. Phillips 66 shall transfer any manually recorded monitoring data to the electronic database of Paragraph 142 within seven (7) days of monitoring.

### QA/QC of LDAR Data (Paragraph 144)

Phillips 66, or a third party contractor retained by Phillips 66, shall develop and implement a procedure to ensure a quality assurance/quality control (“QA/QC”) review of all data generated by LDAR monitoring technicians. This QA/QC procedure shall include the procedures as set forth in paragraph 144 of the Consent Decree.

### Calibration/Calibration Drift Assessment (Paragraphs 145-146)

Calibration: Phillips 66 shall conduct all calibrations of LDAR monitoring equipment using methane as the calibration gas, in accordance with 40 CFR Part 60, EPA Reference Test Method 21.

Calibration Drift Assessment: Phillips 66 shall conduct calibration drift assessments of LDAR monitoring equipment at the end of each monitoring shift, at a minimum. Phillips 66 shall conduct the calibration drift assessment using, at a minimum, a 500 ppm calibration gas. If any calibration drift assessment after the initial calibration shows a negative drift of more than 10% from the previous calibration, Phillips 66 shall re-monitor all valves that were monitored since the last calibration that had a reading greater than 100 ppm and shall re-monitor all pumps that were monitored since the last calibration that had a reading greater than 500 ppm.

### Delay of Repair (Paragraph 147-149)

For any equipment for which Phillips 66 is allowed, under 40 CFR 60.482-9(a) or equivalent state regulation, to place on the “delay of repair” list for repair, Phillips 66 shall: Require sign-off by the unit supervisor, which position shall be identified in the written program that the piece of equipment is technically infeasible to repair without a process unit shutdown, before the component is eligible for inclusion on the “delay of repair” list; and include equipment that is placed on the “delay of repair” list in Phillips 66’s regular LDAR monitoring. For leaks above the internal leak definition rate and below the regulatory rate, Phillips 66 shall have 30 days to put the equipment on the delay of repair list.

For valves, other than control valves or pressure relief valves that qualify to be on the “delay of repair” list and are leaking at a rate of 50,000 ppm or greater, Phillips 66 will undertake “extraordinary efforts” to fix the leaking valve rather than keeping the valve on the “delay of repair” list, unless Phillips 66 can demonstrate that there is a safety, mechanical, or major environmental concern posed by repairing the leak in that manner. For valves, extraordinary effort will be undertaken within 120 days of the valve being placed on the “delay of repair” list.

After two unsuccessful attempts to repair a leaking valve through the drill and tap method, Phillips 66 may keep the leaking valve on its “delay of repair” list. Phillips 66 will implement these extraordinary repair procedures within 30 days of completion of the written program. Phillips 66 will also make extraordinary efforts to repair those valves which have been placed on the delay of repair list which leak at 10,000 ppm for more than three years. Phillips 66 may delay these repairs further if it can demonstrate that there is a safety, mechanical or major environmental concern posed by repairing the leak in this manner.

### Recordkeeping and Reporting Requirements (Paragraphs 151-153)

Quarterly Progress Report for the First Calendar Quarter of Each Year – Reporting on Audits: Phillips 66 will report on the audits and corrective actions (Paragraphs 128 – 133) in the quarterly progress report that Phillips 66 submits for the first calendar quarter of each year pursuant to Part XIV of the Consent Decree. For the remainder of the audits required pursuant to the Consent Decree, in the quarterly progress report that Phillips 66 submits for the first calendar quarter of each year, Phillips 66 shall identify the auditors, identify that a written plan exists identifying corrective action for any deficiencies identified in the audits and that this plan is being implemented.

Reports due under 40 CFR 63.654: In each report due under 40 CFR 63.654, Phillips 66 shall include the information included in Paragraph 151 of the Consent Decree.

### Agencies to Receive Reports, Plans and Certifications Required in the Part IX; Number of Copies (Paragraph 153)

Phillips 66 shall submit all reports, plans and certifications required to be submitted under Paragraphs 150 – 151 to EPA and the state agency. Upon written agreement of the parties, Phillips 66 may submit the materials electronically.

## Reporting and Recordkeeping

Recordkeeping: Per Paragraph 211, Phillips 66 shall retain all records required to be maintained in accordance with this Consent Decree for a period of five (5) years after termination of the Consent Decree, unless other regulations require the records to be maintained longer. Per Paragraph 21, reports required to be certified must include a specific certification.

Reporting: Paragraph 213, 213A, and 213B require Phillips 66 to provide specific information in the semi-annual reports it submits to EPA and Montana DEQ. Each semi-annual report will contain:

- (a) Progress report on the implementation of the requirements of Parts IV - XII at the relevant Refinery;
- (b) A summary of the emissions data and Hydrocarbon Flaring Incidents for the relevant Refinery that is specifically required by the reporting requirements of Parts IV-XII and XIV of this Consent Decree for the period covered by the report;
- (c) A description of any problems anticipated with respect to meeting the requirements of Parts IV-XII of this Consent Decree at the relevant Refinery;
- (d) A description of the status of all SEPs/BEPs (if any) being conducted at the Refinery;
- (e) Any such additional matters as the Company believes should be brought to the attention of EPA and the Applicable Plaintiff-Intervene; and
- (f) Any emission exceedances and/or CEMS downtime that occurred during the reporting period.

Additionally, in the semi-annual report required to be submitted on July 31 of each year, the Company shall provide a summary of annual emissions data for the prior calendar year to include:

- (a) NO<sub>x</sub>, SO<sub>2</sub>, CO and PM emission tons per year for each heater and boiler greater than 40 mmBTU/hr maximum fired duty;
- (b) NO<sub>x</sub>, SO<sub>2</sub>, CO and PM emission in tons per year for each FCCU;
- (c) SO<sub>2</sub> emissions from all Sulfur Recovery Plants in tons per year;
- (d) SO<sub>2</sub> emissions from all acid gas flaring and tail gas incidents by flare in tons per year; and
- (e) NO<sub>x</sub>, SO<sub>2</sub>, PM and CO emissions in tons per year as a sum at each refinery for all other emissions units for which emissions information is required to be included in the facilities' annual emissions summaries and are not identified in (a) through (d) and (f) of this paragraph;
- (f) NO<sub>x</sub>, SO<sub>2</sub>, CO and PM emission in tons per year as a sum for all heaters and boilers less than 40 mmBTU/hr maximum fired duty; and
- (g) For each of the estimates in (a) through (d) above, the basis for the emissions estimate or calculation (i.e. stack tests, CEMS, emission factor, etc.).

To the extent that the required emissions summary data is available in other reports generated by the Company, such other reports can be attached, or the appropriate information can be extracted from such other reports and attached to this semi-annual report to satisfy this requirement. Company may submit a written request to EPA to stop supplying Paragraph 213A reports, and if EPA approves this request in writing, Company shall no longer be required to provide such reports.