June 28, 2021

Jim Irwin
CHS, Inc.
Laurel Refinery
PO Box 909
Laurel, MT 59044-0909

RE: Final Title V Operating Permit #OP1821-19

Dear Mr. Irwin:

The Department of Environmental Quality has prepared the enclosed Final Operating Permit #OP1821-19, for CHS Inc.’s Laurel Refinery, located in the South ½, Section 16, Township 2 South, Range 24 East, Yellowstone County, Montana. Please review the cover page of the attached permit for information pertaining to the action taking place on Permit #OP1821-19.

If you have any questions, please contact Craig Henrikson, the permit writer, at (406) 444-6711 or by email at chenrikson@mt.gov.

Sincerely,

Elizabeth A. Ulrich signing for Julie A. Merkel
Julie A. Merkel
Permitting Services Supervisor
Air Quality Bureau
(406) 444-3626

Craig Henrikson, P.E.
Environmental Engineer
Air Quality Bureau
(406) 444-6711

JM: CH
Enclosure

Cc: Gail Fallon, US EPA Region VIII 8P-AR
STATE OF MONTANA
Department of Environmental Quality
Helena, Montana 59620

AIR QUALITY OPERATING PERMIT: OP1821-19

Issued to: CHS Inc.
Laurel Petroleum Refinery
PO Box 909
Laurel, MT 59044-0909

Final Date: June 26, 2021
Expiration Date: September 28, 2025
Renewal Application Due: March 28, 2025

Effective Date: June 26, 2021
Date of Decision: May 26, 2021

Application Received: March 31, 2021
Application Deemed Technically Complete: March 31, 2021
Application Deemed Administratively Complete: March 31, 2021

Permit Issuance and Appeal Process: 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 June 26, 2021. 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 B 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: CHS, Inc.

Mailing Address: P.O. Box 909, 803 Highway 212 South

City: Laurel State: Montana Zip: 59044-0909

Plant Location: S½, Section 16, Township 2 South, Range 24 East, Yellowstone County

Responsible Official: Jim Irwin

Facility Contact Person: Shane Lacasse

Primary SIC Code: 2911

Nature of Business: Petroleum Refining

Description of Process: CHS operates a petroleum refinery in Laurel, Montana. 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 major processing equipment includes:

- Crude Units and Naphtha Splitter
- Naphtha Hydrotreaters (NHT) (previously Unifiners)
- Platformer (Naphtha Reformer)
- Benzene Reduction Unit (BRU)
- Fluid Catalytic Cracking (FCC) Unit
- Alkylation/Butamer/Merox/Saturate Units
- Mild Hydrocracker (MHC) Unit
- Sulfur Recovery Units (SRUs) with Tailgas Treatment Units (TGTUs) and Tailgas Incinerators
- Ultralow Sulfur Diesel Unit
- Delayed Coker Unit
- Transfer Facilities (Truck Product Loading, Railcar Product Loading)
- Steam Generation Units
- Wastewater Treatment Units
- Miscellaneous Storage Tanks
- Sour Water Stripper Ammonia Combustor
- Flare Systems
- Hydrogen Plants
- Stationary Engines
The emission units regulated by this permit are the following (ARM 17.8.1211):

<table>
<thead>
<tr>
<th>Emission Unit ID</th>
<th>Description</th>
<th>Pollution Control Device/Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU001</td>
<td>Plant-wide and Multiple Emitting Unit Limitations</td>
<td>MAQP Limits, Billings/ Laurel SO2 Stipulation. CEMS on Refinery Fuel Gas system; NSPS J – all FG combustion devices, except NSPS Ja units</td>
</tr>
<tr>
<td></td>
<td>• Limits and Conditions associated with MAQP 1821-05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Plant-wide Fuel Gas Combustion Device Limitations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• SIP Multiple Emitting Unit Limitations</td>
<td></td>
</tr>
<tr>
<td>EU002</td>
<td># 1 Crude Unit and Naphtha Splitter</td>
<td>LDAR – NSPS GGGa, MACT CC; MACT DDDDD NSPS Ja (CV-HTR-4) – H2S in RFG only</td>
</tr>
<tr>
<td></td>
<td>• # 1 Crude Unit Preheater (CV-HTR-1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• # 1 Crude Unit Main Heater (CV-HTR-2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• # 1 Crude Unit Vacuum Heater (CV-HTR-4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Low Pressure Vapor Recovery Compressor (C-401)</td>
<td></td>
</tr>
<tr>
<td>EU003</td>
<td># 2 Crude Unit</td>
<td>LDAR – NSPS GGG, MACT CC, MACT DDDDD</td>
</tr>
<tr>
<td></td>
<td>• # 2 Crude Unit Main Heater (2CV-HTR-1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• # 2 Crude Unit Vacuum Heater (2CV-HTR-2)</td>
<td></td>
</tr>
<tr>
<td>EU004</td>
<td>• PDA Unit – SHUT DOWN</td>
<td></td>
</tr>
<tr>
<td>EU005</td>
<td>Naphtha Hydrotreating Unit</td>
<td>LDAR – NSPS GGG, MACT CC MACT DDDDD MAQP limits – NHT Charge Heater Low NOx technology – NHT Charge Heater</td>
</tr>
<tr>
<td></td>
<td>• NHT Charge Heater (H-8301)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• NHT Reboiler Heater #1 (H-8302)</td>
<td></td>
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<tr>
<td></td>
<td>• NHT Reboiler Heater #2 (H-8303)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• NHT Splitter Reboiler Heater (H-8304)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Makeup Hydrogen Compressor (C-8302A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Recycle Hydrogen Compressor (C-8302B)</td>
<td></td>
</tr>
<tr>
<td>EU006</td>
<td>Middle Distillate Unifiner – SHUT DOWN’N</td>
<td></td>
</tr>
<tr>
<td>Emission Unit ID</td>
<td>Description</td>
<td>Pollution Control Device/Practice</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------</td>
<td>-----------------------------------</td>
</tr>
</tbody>
</table>
| EU007            | Platformer Unit, including the Benzene Reduction Unit (BRU)  
• Platformer Heater (P-HTR-1)  
• Platformer Debutanizer Reboiler Heater (P-HTR-2)  
• Platformer Splitter Reboiler (P-HTR-3)  
• Benzene Reduction Unit Oily Water Sewer | LDAR – NSPS GGGa (BRU), MACT CC, Low NOx technology (Platformer Splitter Reboiler)  
NSPS Ja – Platformer Splitter Reboiler (H2S in RFG only)  
NSPS QQ (BRU)  
MACT UUU, DDDDD  
MAQP limits – Platformer Splitter Reboiler |
| EU008            | Fluid Catalytic Cracking (FCC) Unit  
• FCC Charge Heater (FCC-Htr-1)  
• FCC Regenerator (FCC-VSSL-1) | LDAR – MACT CC,  
FCC Regenerator: SO2/NOx/CO CEMS and COMS; ESP (control device);  
NSPS J (PM, SO2), NSPS Ja (CO),  
MAQP limits, MACT UUU;  
Billings/Laurel SO2 Stipulation  
FCC Charge Heater: Low NOx Technology NSPS Ja, NOx CEM, MACT DDDDD, MAQP limits |
| EU009            | Alkylation/Butamer/Merox/Saturate Units  
• Alkylation Unit Hot Oil Belt Heater (ALKY-HTR-1)  
• Group 1 Miscellaneous Process Vents (Alkylation Unit Butamer Stabilizer Off Gas and Disulfide Separator Off Gas) | LDAR – NSPS GGG  
MACT CC, DDDDD |
| EU010            | Mild Hydrocracker (MHC) and Hydrogen Plant (100 Unit)  
• Reformer Heater (H-101)  
• Reformer Heater (H-102)  
• Reactor Charge Heater (H-201)  
• Fractionator Feed Heater (H-202)  
• Recycle Hydrogen Compressor (C-203)  
• Makeup Hydrogen Compressor (C-204A/B) | LDAR – NSPS GGG (Hydrogen Plant), NSPS GGGa (MHC, compressors), MACT CC  
MAQP Limits (heaters)  
Low NOx Technology (on heaters)  
H-102: NSPS Ja, NOx/CO CEM |
| EU011            | Zone D SRU and TGTU and TGI  
• Tail Gas Incinerator (INC-401) | MAQP Limits  
SO2 CEMS  
Billings / Laurel SO2 Stipulation  
NSPS Ja  
MACT UUU |
| EU012            | Zone A #1 and #2 SRU feeding one TGTU and TGI  
• Tail Gas Incinerator (SRU-AUX-4) | SO2 CEMS,  
Billings / Laurel SO2 Stipulation  
NSPS J, QQ (TGTU)  
MACT UUU |
| EU013            | Steam Generation Units  
• Boiler #9  
• Boiler #10  
• Boiler #11  
• Boiler #12 | MAQP Limits  
LDAR – NSPS GGG (10 & 11), NSPS GGGa (12)  
Low NOx Technology (Boilers #10, #11, and #12)  
NSPS Db (10, 11 and 12), Ja (12 – H2S in RFG only)  
MACT DDDDD |
| EU014 | Tank Farm (non-Wastewater):  
|       | • Refinery MACT I Group 1 Storage Vessels  
|       | • Refinery MACT I Group 2 Storage Vessels  
|       | • Refinery MACT I Exempt vessels – pressure vessels, not organic HAP, not refining  
|       | Internal and External Floating Roofs, Fixed Roofs  
|       | LDAR (MACT CC, BACT, as applicable)  
|       | NSPS Kb  
|       | UU (as applicable)  
|       | MAQP limits  
| EU015 | Transfer Facilities  
|       | • Asphalt Loading Heater #1  
|       | • Truck Product Loading Rack and VCU  
|       | • Railcar Product Loading Rack and VCU  
|       | • Railcar Gasoline Component Unloading  
|       | VCU (control device) on Light Product Truck Loading Rack and Railcar Loading Rack,  
|       | LDAR – MACT CC, BACT  
|       | Proper design and operating practices  
|       | NSPS Ja, XX  
|       | MACT CC (Loading rack), DDDDD MAQP limits  
| EU016 | Wastewater Treatment Units  
|       | • Separators  
|       | API separators: T-23A/B, TK-3437, TK-3447  
|       | Separators – slop oil facilities: T-16, T-17, T-18  
|       | Dissolved gas flotation units: TK-3448, TK-3458  
|       | Other separators: TK-23, T-14  
|       | • Storage Vessels  
|       | Wastewater: T-20, T-25, TK-25, TK-3436  
|       | Slop oil: TK-44, TK-118  
|       | Sour water: TK-128, TK-129  
|       | Foam/sludge: TK-3449, TK-3450, TK-3451  
|       | • Control Devices  
|       | F-3401A/B/C Activated carbon beds  
|       | 034IN0001 Wastewater Area Combustor  
|       | NSPS QQQ, Kb (as applicable)  
|       | LDAR – BACT  
|       | MACT CC  
| EU017 | Flare Systems  
|       | • Main Refinery Flare (FL-7202)  
|       | • Zone E Coker Flare (FL-7201)  
|       | Flare – Control Device, flare gas recovery system  
|       | Billings/Laurel SO₂ Stipulation (Main Refinery Flare)  
|       | Billings/Laurel SO₂ FIP  
|       | NSPS Ja  
|       | MACT CC  
|       | LDAR - BACT  
| EU018 | RCRA Units  
|       | Restrictions on Land Tillage (HSWA permit)  

CEMS: NOₓ, CO (10, 11, 12)
| EU019 | Cooling Towers  
- Cooling Towers #1, #2, #3  
- Cooling Tower #5  
- Cooling Tower #6 (Coker Cooling Tower)  
- Heat Exchange Systems associated with each cooling tower | MACT CC – heat exchange systems  
Mist eliminator (#6) |
| EU020 | Saturate Gas Concentration Unit – naphtha splitter consolidated with EU002 |
| EU021 | Ultra-Low Sulfur Diesel (ULSD) (900 Unit) and Hydrogen Plant (1000 Unit)  
- Reactor Charge Heater (H-901)  
- Fractionator Reboiler (H-902)  
- Reformer Heater (H-1001)  
- C-901A/B Compressor  
- C-902A/B Compressor | LDAR – NSPS GGG, MACT CC  
NSPS Ja (H-1001), QQQ  
MACT DDDDDD  
Low NOx technology (heaters)  
CEMs: NOx (H-901, H-902, H-1001) and CO (H-1001) |
| EU022 | Delayed Coker Unit  
- Coker Charge Heater (H-7501)  
- Coke Processing Operations  
- C-7601 compressor  
- Coke drum steam vent | LDAR – NSPS GGG, MACT CC  
NSPS QQQ  
MACT CC, DDDDD  
Reasonable precautions for coke processing  
Low NOx technology  
MAQP limits  
CEMS – CO (heater) |
| EU023 | Zone E SRU, TGTU and TGI | NSPS J  
MACT UUU  
MAQP limits  
CEMs – SO2 |
| EU024 | Ammonia Combustor | SCR  
NSPS Ja  
MAQP limits  
CEMs – NOx, SO2 |
| EU025 | Hydrogen Plant #3  
Hydrogen Reformer Heater (067HT0001) | SCR on Reformer Heater  
LDAR – NSPS GGGa, MACT CC  
NSPS – Ja, QQQ  
MACT – DDDDDD  
MAQP limits  
CEMs – NOx, CO |
<table>
<thead>
<tr>
<th>EU026</th>
<th>Stationary Engines</th>
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<tbody>
<tr>
<td></td>
<td>• Emergency Generators</td>
</tr>
<tr>
<td></td>
<td>Admin 1 EG (021-GN-0204)</td>
</tr>
<tr>
<td></td>
<td>Zone C DCS EG (024-SG-001)</td>
</tr>
<tr>
<td></td>
<td>Zone E DCS EG (075-SG-001)</td>
</tr>
<tr>
<td></td>
<td>CCB EG1 (002-SG-002)</td>
</tr>
<tr>
<td></td>
<td>CCB EG2 (002-SG-003)</td>
</tr>
<tr>
<td></td>
<td>Zone B DCS EG (004-SG-025)</td>
</tr>
<tr>
<td></td>
<td>Westside Complex EG (002-SG-001)</td>
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<td></td>
<td>Zone D DCS EG (065-SG-003)</td>
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<tr>
<td></td>
<td>Zone A DCS EG (004-SG-001)</td>
</tr>
<tr>
<td></td>
<td>Truck Terminal EG (LtlTermGen)</td>
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<tr>
<td></td>
<td>Admin 3 EG (021-GN-1031)</td>
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<tr>
<td></td>
<td>• Diesel Fire Water Pump Engines</td>
</tr>
<tr>
<td></td>
<td>East Fire Pump #1 (EG-2205)</td>
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<tr>
<td></td>
<td>East Fire Pump #2 (EG-2206)</td>
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<td></td>
<td>Tank 134 East Pump (P-2207)</td>
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<td></td>
<td>Tank 134 West Pump (P-2208)</td>
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<td></td>
<td>West Diesel Pump (P-2204)</td>
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<tr>
<td></td>
<td>• Emergency Plant Air Compressors</td>
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<tr>
<td></td>
<td>Zone C Plant Air Compressor (024CO0064)</td>
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<tr>
<td></td>
<td>Zone E Plant Air Compressor (026CO0004)</td>
</tr>
<tr>
<td></td>
<td>NSPS III, JJJJ</td>
</tr>
<tr>
<td></td>
<td>MACT ZZZZ</td>
</tr>
</tbody>
</table>
Section III. PERMIT CONDITIONS

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

A. Facility-Wide

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Rule Citation</th>
<th>Rule Description</th>
<th>Pollutant/Parameter</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1</td>
<td>ARM 17.8.105</td>
<td>Testing Requirements</td>
<td>Testing Requirements</td>
<td>------</td>
</tr>
<tr>
<td>A.2</td>
<td>ARM 17.8.106</td>
<td>Source Testing Protocol</td>
<td>Testing, Recordkeeping, and Reporting Requirements</td>
<td>------</td>
</tr>
<tr>
<td>A.3</td>
<td>ARM 17.8.304(1)</td>
<td>Visible Air Contaminants</td>
<td>Opacity</td>
<td>40%</td>
</tr>
<tr>
<td>A.4</td>
<td>ARM 17.8.304(2)</td>
<td>Visible Air Contaminants</td>
<td>Opacity</td>
<td>20%</td>
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<tr>
<td>A.5</td>
<td>ARM 17.8.304(3)</td>
<td>Visible Air Contaminants</td>
<td>Opacity</td>
<td>60%</td>
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<tr>
<td>A.6</td>
<td>ARM 17.8.308(1)</td>
<td>Particulate Matter, Airborne</td>
<td>Fugitive Opacity</td>
<td>20%</td>
</tr>
<tr>
<td>A.7</td>
<td>ARM 17.8.308(2)</td>
<td>Particulate Matter, Airborne</td>
<td>Reasonable Precautions</td>
<td>------</td>
</tr>
<tr>
<td>A.8</td>
<td>ARM 17.8.308(3)</td>
<td>Particulate Matter, Airborne</td>
<td>Reasonable Precaution, Construction and Demolition</td>
<td>20%</td>
</tr>
<tr>
<td>A.9</td>
<td>ARM 17.8.309</td>
<td>Particulate Matter, Fuel Burning Equipment</td>
<td>Particulate Matter</td>
<td>$E = 0.882 \cdot H^{-0.1664}$ or $E = 1.026 \cdot H^{-0.233}$</td>
</tr>
<tr>
<td>A.10</td>
<td>ARM 17.8.310</td>
<td>Particulate Matter, Industrial Processes</td>
<td>Particulate Matter</td>
<td>$E = 4.10 \cdot P^{0.167}$ or $E = 55 \cdot P^{0.11} \cdot 40$</td>
</tr>
<tr>
<td>A.11</td>
<td>ARM 17.8.322(4) and State Implementation Plan (SIP)</td>
<td>Sulfur Oxide Emissions, Sulfur in Fuel, Plant-wide</td>
<td>Sulfur in Fuel (liquid or solid fuels)</td>
<td>1 lb/MMBtu fired</td>
</tr>
<tr>
<td>A.12</td>
<td>ARM 17.8.322(5) and SIP</td>
<td>Sulfur Oxide Emissions, Sulfur in Fuel, Plant-wide</td>
<td>Sulfur in Fuel (gaseous)</td>
<td>50 gr/100 CF</td>
</tr>
<tr>
<td>A.13</td>
<td>ARM 17.8.322(5)</td>
<td>Sulfur Oxide Emissions, Sulfur in Fuel</td>
<td>Sulfur in Fuel (gaseous)</td>
<td>50 gr/100 CF</td>
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<tr>
<td>A.14</td>
<td>ARM 17.8.324(3)</td>
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**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 (July 1994), unless alternate methods are approved by the Department.

A.3. Pursuant to ARM 17.8.304(1), CHS 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.

A.4. Pursuant to ARM 17.8.304(2), CHS 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.

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), CHS 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), CHS 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), CHS 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 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, CHS 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):

\[ E = 0.882 \times H^{0.1664} \]

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

\[ E = 1.026 \times H^{0.233} \]

Where \( H \) is the heat input capacity in million British Thermal Units (MMBtu) per hour and \( E \) is the maximum allowable particulate emission rate in pounds per MMBtu.

A.10. Pursuant to ARM 17.8.310, unless otherwise specified by rule or in this permit, CHS 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:

\[ E = 4.10 \times P^{0.67} \]

For process weight rates in excess of 30 tons per hour:

\[ E = 55.0 \times P^{0.11} - 40 \]

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), CHS shall not burn liquid or solid fuels containing sulfur in excess of 1 pound per MMBtu fired, unless otherwise specified by rule or in this permit. This rule shall be interpreted to mean that no person shall burn solid, liquid, or gaseous fuels such that the aggregate sulfur content of all fuels burned within a plant during any day exceeds 1 pound of sulfur per MMBtu fired. The rule shall be interpreted to allow for a daily deviation of 0.1 pound of sulfur per million MMBtu fired. The rule shall be interpreted to allow the blending of all fuels burned in a plant during a given time period in determining the aggregate sulfur content for purposes of the rule, and it shall not be construed to require blending or physical mixing of fuels at any given furnace or heater within the plant complex (SIP).

A.12. Pursuant to ARM 17.8.322(5), CHS 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 1 pound of sulfur per MMBtu fired. The rule shall be interpreted to allow for a daily deviation of 0.1 pound of sulfur per MMBtu fired. The rule shall be interpreted to allow the blending of all fuels burned in a plant during a given time period in determining the aggregate sulfur content for purposes of the rule, and it shall not be construed to require blending or physical mixing of fuels at any given furnace or heater within the plant complex (SIP).

A.13. CHS 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 (ARM 17.8.322(5)).

A.14. Pursuant to ARM 17.8.324(3), CHS 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.15. Pursuant to ARM 17.8.324(1), unless otherwise specified by rule or in this permit, CHS 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.16. Pursuant to ARM 17.8.324(2), unless otherwise specified by rule or in this permit, CHS 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 of 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.18. Pursuant to ARM 17.8.302 and ARM 17.8.342, and 40 CFR 63.6, the owner or operator must maintain at the affected source a current startup, shutdown, and malfunction plan (if a plan is required by 40 CFR 63.6(e)(3) and the Table for General Provision Applicability of the appropriate subpart), meeting the requirements of 40 CFR 63.6, and must make the plan available upon request. In addition, if the startup, shutdown, and malfunction plan is subsequently revised, the owner or operator must maintain at the affected source each previous (i.e., superseded) version of the startup, shutdown, and malfunction plan, and must make each such previous version available for a period of 5 years after revision of the plan. The owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in 40 CFR 63.10(d)(5).

A.19. Pursuant to ARM 17.8.615, CHS shall apply for and comply with a Firefighter Training permit to conduct open burning for fire training purposes.

A.20. CHS shall comply with 40 CFR 61, Subpart M – NESHAP for asbestos. Further, pursuant to ARM 17.74.359, CHS shall comply with all the limitations and requirements of their Asbestos Abatement Annual Permit.

A.21. CHS shall submit a certification statement to the Department that states CHS is in compliance with the requirements of 40 CFR 68, including registration and updates of their Risk Management Plan (40 CFR 68.150, 68.160 and 68.190).

A.22. CHS shall comply with all requirements of Exhibit A, and Attachments 1 and 2 of the sulfur dioxide control plan (EPA Board Order signed on June 12, 1998, and subsequent revisions of March 17, 2000; the control plan was partially approved/partially disapproved by EPA on May 2, 2002, and May 22, 2003; 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) (see Appendix E of this permit).

A.23. CHS shall comply with all requirements of Exhibit A-1 and corresponding attachments of the sulfur dioxide control plan (Board Order signed on June 12, 1998, and subsequent revisions of March 17, 2000; this requirement is “State Only”) (see Appendix E of this permit).

A.24. CHS 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 which are not otherwise subject to Stipulation and Exhibit A (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).
A.25. CHS 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, CHS shall account for such emissions in determining compliance with all applicable emission limits contained in Exhibit A, Section 3 (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

A.26. CHS shall comply with the miscellaneous maintenance process vent provisions of 40 CFR 63.643 as appropriate.

A.27. CHS shall comply with the fenceline monitoring provisions of 40 CFR 63.658.

**Reporting**

A.28. CHS shall comply with all reporting requirements of Exhibit A and Attachment 1 of the plan (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

A.29. CHS shall comply with all reporting requirements of Exhibit A-1 of the sulfur dioxide control plan (Board Order signed on June 12, 1998, and subsequent revisions of March 17, 2000; this requirement is “State Only”).

A.30. Pursuant to ARM 17.8.1211(1)(c) and 40 CFR Part 98, CHS 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.31. CHS 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.32. CHS shall maintain, under CHS’s control, all records required for compliance monitoring as a permanent business record for at least 5 years. The records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

A.33. On or before February 15 and August 15 of each year, CHS 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 15 of each year, CHS may submit a single report, provided that it contains all the information required by Section V.B & V.D. Per ARM 17.8.1207,

> any application form, report, or compliance certification submitted pursuant to ARM Title 17, Chapter 8, Subchapter 12 (including semiannual monitoring reports), shall contain certification by a responsible official of truth, accuracy and completeness. This certification and any other certification required under ARM Title 17, Chapter 8, Subchapter 12, shall state that, “based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.”
A.34. By February 15 of each year, CHS shall submit to the Department the compliance certification required by Section V.B. The annual certification required by Section V.B must include a statement of compliance based on the information available which identifies any observed, documented or otherwise known instance of noncompliance for each applicable requirement. Per ARM 17.8.1207,

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

B. EU001 –Multiple Emitting Unit Limitations

1. Limitations and Conditions Associated with MAQP #1821-05:

   a. Gas-Fired External Combustion Sources:
      
      • # 1 Crude Heater  
      • Crude Preheater  
      • #1 Crude Vacuum Heater  
      • #2 Crude Heater  
      • #2 Crude Vacuum Heater  
      • Alkylation Unit Hot Oil Belt Heater  
      • Platformer Charge Heater (P-HTR-1)  
      • Platformer Debutanizer Heater  
      • #1 Road Oil/Asphalt Loading Heater  
      • 60 Tank Heater  
      • Boiler #9  
      • Boiler #10  
      • H-101 Zone D Hydrogen Plant Reformer Heater  
      • H-201 Reactor Charge Heater  
      • H-202 Fractionator Feed Heater  
      • NHT Reboiler Heater #1 (H-8302)  
      • NHT Reboiler Heater #2 (H-8303)  
      • NHT Splitter Reboiler Heater (H-8304)  

   b. FCC Unit (FCCU) Regenerator  

   c. Zone A Sulfur Recovery Unit Tail Gas Incinerator  

   d. Zone D Sulfur Recovery Unit Incinerator  

   e. Fugitive Equipment Leaks including all equipment as defined in 40 CFR 60 Subpart VV in VOC service
f. Wastewater sewers, separation, and treatment facilities

g. Cooling Tower Sources: #1, #2, #3, and #5

h. Loading facilities

- Light product truck rack and vapor combustion unit [excludes new facility permitted with MAQP #1821-27]
- Heavy Oil Truck Rack
- Heavy Oil Rail Rack

i. Storage tanks #2, 7, 12, 41, 47, 56, 60, 61, 62, 63, 66, 68, 70, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 85, 86, 88, 91, 92, 93, 94, 95, 96, 100, 101, 102, 103, 104, 108, 109, 110, 111, 112, 113, 114, 117, 118, 120, 121, 122, 123, B-1, B-2, B-7, BP-2, firetk 2, firetk 3, and firetk 4.


Includes NSPS Subpart J requirements for multiple fuel combustion devices. Other sections will contain specific applicability to Subpart J other than the facility-wide RFG requirements, or if the method of compliance with Subpart J is other than H2S monitoring.

3. SIP Multiple Emitting Unit Limitations

(only includes SIP limitations that cover more than one emitting unit, individual emitting unit SIP limits are included under that emitting unit):


i. Refinery fuel oil combustion sources: #1 crude unit main heater

ii. Listed fuel gas-fired sources:

   aa. HDS complex fuel gas-fired units:

   - Reformer Heater (H-101),
   - Reactor Charge Heater (H-201),
   - Fractionator Heater (H-202),
   - Zone D SRU incinerator stack (E-407 and INC-401)

   bb. Pre-1990 fuel gas-fired units:

   - #1 crude preheater (CV-HTR-1), #1 crude unit vacuum heater (CV-HTR-4), #1 crude unit main heater (CV-HTR-2);
   - #2 crude heater (2CV-HTR-1), #2 crude unit vacuum heater (2CV-HTR-2),
• Naphtha Hydrotreater:
  ⇝ NHT Reboiler Heater #1 (H-8302), formerly #1 Naphtha Unifiner charge heater;
  ⇝ NHT Reboiler Heater #2 (H-8303), formerly #1 Naphtha Unifiner stripper heater,
  ⇝ NHT Splitter Reboiler Heater (H-8304), formerly Naphtha Unifiner splitter heater

• Platformer charge heater (P-HTR-1), platformer debutanizer heater (P-HTR-2),
• FCC Charge Heater (FCC-Heater-1), Alkylation unit hot oil belt heater (ALKY-HTR-1),
• #1 fuel oil heater (CV-HTR-9), Boiler #9, and #1 asphalt loading heater

cc. Post-1990 listed fuel gas-fired unit:

• Boiler #10

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<td>MAQP #1821-05 Limitations: SO₂</td>
<td>2,980.3 ton/yr</td>
<td>Recordkeeping</td>
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<td>MAQP #1821-05 Limitations: NOₓ</td>
<td>999.4 ton/yr</td>
<td>Recordkeeping</td>
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<td>MAQP #1821-05 Limitations: CO</td>
<td>678.2 ton/yr</td>
<td>Recordkeeping</td>
<td>Ongoing</td>
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<td>1,967.5 ton/yr</td>
<td>Recordkeeping</td>
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<td>B.5, B.12, B.13, B.26, B.27, B.28, B.29, B.30, B.32, B.33</td>
<td>MAQP #1821-05 Limitations: PM₁₀</td>
<td>152.2 ton/yr</td>
<td>Recordkeeping</td>
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<td>MAQP #1821-05 Limitations: PM</td>
<td>162.2 ton/yr</td>
<td>Recordkeeping</td>
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<td>SIP: SO₂ for listed fuel gas burning sources only</td>
<td>3,014.7 lb/3-hour Period</td>
<td>SO₂/H₂S CEMS, Sampling</td>
<td>Ongoing</td>
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<td>SIP: SO₂ for listed fuel gas burning sources only</td>
<td>24,117.6 lb/Calendar Day</td>
<td>SO₂/H₂S CEMS, Sampling</td>
<td>Ongoing</td>
<td>Method 11 Annually Semiannually</td>
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<td>SIP: SO₂ for listed fuel gas burning sources only</td>
<td>8,802,924 lb/Calendar Year</td>
<td>SO₂/H₂S CEMS, Sampling</td>
<td>Ongoing</td>
<td>Method 11 Annually Semiannually</td>
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<td>B.11, B.16, B.17, B.18, B.23, B.24, B.26, B.27, B.28, B.30, B.32, B.33</td>
<td>H₂S in Refinery Fuel Gas</td>
<td>0.10 gr/dscf (161 ppmv / 3-hour average and 0.05 gr/dscf (81 ppmv / 12-month average</td>
<td>H₂S CEMS</td>
<td>Ongoing</td>
<td>Method 11 Annually</td>
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**Conditions**

B.1. MAQP #1821-05 Annual Limitations: SO₂ emissions shall not exceed 2,980.3 tons per year (ARM 17.8.749).

B.2. MAQP #1821-05 Annual Limitations: NOₓ emissions shall not exceed 999.4 tons per year (ARM 17.8.749).

B.3. MAQP #1821-05 Annual Limitations: CO emissions shall not exceed 678.2 tons per year (ARM 17.8.749).

B.4. MAQP #1821-05 Annual Limitations: VOC emissions shall not exceed 1,967.5 tons per year (ARM 17.8.749).

B.5. MAQP #1821-05 Annual Limitations: PM₁₀ emissions shall not exceed 152.2 tons per year (ARM 17.8.749).

B.6. MAQP #1821-05 Annual Limitations: PM emissions shall not exceed 162.2 tons per year (ARM 17.8.749).

B.7. CHS shall not cause or authorize total SO₂ emissions from refinery combustion sources and fuel gas-fired sources to exceed the limit of 3,014.7 pounds per 3-hour period (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 22, 2003).

B.8. CHS shall not cause or authorize total SO₂ emissions from refinery combustion sources and fuel gas-fired sources to exceed the limit of 24,117.6 pounds per calendar day (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 22, 2003).

B.9. CHS shall not cause or authorize total SO₂ emissions from refinery combustion sources and fuel gas-fired sources to exceed the limit of 8,802,924 pounds per calendar year (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 22, 2003).

B.10. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart J-Standards of Performance for Petroleum Refineries, as it applies to all fuel gas combustion devices that are not subject to 40 CFR 60 Subpart Ja (Originated from the consent decree and incorporated as part of MAQP #1821-11). Applicability to Subpart Ja is identified on a source-by-source basis within the permit.
B.11. CHS shall not cause or authorize hydrogen sulfide (H₂S) in refinery fuel gas burned in fuel combustion devices to exceed 0.10 grains of H₂S per dry standard cubic foot (161 parts per million, volumetric dry (ppmvd) H₂S) per rolling 3-hour average or 0.05 grains of H₂S per dry standard cubic foot (81 ppmvd H₂S) per 12-month average (ARM 17.8.749 and 40 CFR 60 Subpart J).

Compliance Demonstration

B.12. CHS shall monitor compliance with the annual MAQP #1821-05 limitations based on source type, pollutant, calculation basis (emission factors, estimated yield and conversion), and key parameters (fuel oil use, fuel gas use, process gas use, and Continuous Emissions Monitoring System (CEMS) data) (ARM 17.8.749).

1. Gas fired external combustion
   a. SO₂
   i. Calculation Basis: AP-42 Section 1-4 (7/98 revision) and complete conversion of fuel gas H₂S to SO₂
   ii. Key Parameters: Monthly fuel use (scf) per combustion unit and refinery fuel gas H₂S content from CEMS.
   b. NOₓ, CO, PM₁₀/PM, VOC
      i. Calculation Basis: AP-42 Section 1-4 (7/98 revision)
      ii. Key Parameters: Monthly fuel use (scf) per combustion unit and monthly average fuel gas heat content.

2. Gas fired internal combustion
   a. SO₂
      i. Calculation Basis: AP-42 Section 1-4 (7/98 revision) and complete conversion of fuel gas H₂S to SO₂
      ii. Key Parameters: Monthly fuel use (scf) per combustion unit and fuel gas H₂S and Sulfur content
   b. NOₓ, CO
      i. Calculation Basis: AP-42 Section 3-2 (10/96 revision)
      ii. Key Parameters: Monthly fuel use (scf) per combustion unit and monthly average fuel gas heat content
   c. VOC
      Calculation Basis: AP-42 Section 3-2 (10/96 revision)
      Key Parameters: Monthly fuel use (scf) per combustion unit and monthly average fuel gas heat content
3. Boiler #10

a. \( \text{SO}_2 \)
   
i. Calculation Basis: Complete conversion of fuel gas \( \text{H}_2\text{S} \) to \( \text{SO}_2 \)
   
ii. Key Parameters: Monthly fuel use (scf) per combustion unit and refinery fuel gas \( \text{H}_2\text{S} \) content from CEMS

b. \( \text{NO}_x \)
   
i. Calculation Basis: \( \text{NO}_x \) and \( \text{O}_2 \) CEMS, Emission factors based on most recent stack tests
   
ii. Key Parameters: \( \text{NO}_x \) and \( \text{O}_2 \) CEMS, Reference Method 19, \( \text{NO}_x \) stack tests, monthly fuel use (scf)

c. \( \text{CO} \)
   
i. Calculation Basis: Emission factors based on most recent stack tests
   
ii. Key Parameters: \( \text{CO} \) stack tests, monthly fuel use (scf)

d. \( \text{PM}_{10}/\text{PM} \)
   
i. Calculation Basis: AP-42 Section 1-4 (7/98 revision)
   
ii. Key Parameters: Monthly fuel use (scf) and monthly average fuel gas heat content

e. \( \text{VOC} \)
   
i. Calculation Basis: Emission factors based on most recent stack tests
   
ii. Key Parameters: VOC stack tests, monthly fuel use (scf)

4. Zone D Combustion Sources (H-101, H-201, and H-202)

a. \( \text{SO}_2 \): Calculation Basis: CEMS data and methodology required in the Billings/Laurel \( \text{SO}_2 \) SIP

b. \( \text{NO}_x \)
   
i. Calculation Basis: \( \text{NO}_x \) and \( \text{O}_2 \) CEMS, Emission factors based on most recent annual stack tests
   
ii. Key Parameters: \( \text{NO}_x \) stack tests, monthly fuel use (scf) per combustion unit

c. \( \text{CO} \)
   
i. Calculation Basis: \( \text{CO} \) and \( \text{O}_2 \) CEMS, Emission factors based on most recent annual stack tests
   
ii. Key Parameters: \( \text{CO} \) stack tests, monthly fuel use (scf) per combustion unit

d. \( \text{PM}_{10}/\text{PM} \)
   
i. Calculation Basis: AP-42 Section 1-4 (7/98 revision)
ii. Key Parameters: Monthly fuel use (scf) per combustion unit and monthly average fuel gas heat content

e. VOC

i. Calculation Basis: Emission factors based on most recent stack tests for sources burning refinery fuel gas. For sources firing only natural gas, the most current VOC stack test will be used to develop emission factors.

ii. Key Parameters: VOC stack test

5. Fugitive equipment leaks

a. SO₂, NOx, CO, PM₁₀/PM: Not applicable

b. VOC

i. Calculation Basis: EPA factors and NSPS and MACT control efficiencies (EPA-453/R-95-017)

ii. Key Parameters: Component counts by type and service

6. FCCU

a. SO₂: Calculation Basis: CEMS data and methodology required in CHS Consent Decree, NSPS Subpart J, and the Billings/Laurel SO₂ SIP.

b. NOx: Calculation Basis: CEMS data and methodology required in CHS Consent Decree, NSPS Subpart J, and FCCU Regenerator flue gas flow rate.

c. CO: Calculation Basis: CEMS data and methodology required in CHS Consent Decree and NSPS Subpart Ja, and FCCU Regenerator flue gas flow rate.

d. PM₁₀/PM

i. Calculation Basis: Annual stack test results

ii. Key Parameters: Monthly FCCU charge rate (bbl)

e. VOC

i. Calculation Basis: AP-42 Section 5.1 (1/95 revision) and assumed 98% control efficiency

ii. Key Parameters: Monthly FCCU charge rate (bbl)

7. Zone A SRU Incinerator

a. SO₂: Calculation Basis: CEMS data and methodology required in Billings/Laurel SO₂ SIP

b. NOx

i. Calculation Basis: Emission factors based on every 5-year stack tests
ii. Key Parameters: Every five-year NO\textsubscript{x} stack test, monthly fuel use (scf)

c. CO, PM\textsubscript{10}/PM, VOC

   i. Calculation Basis: AP-42 Section 1-4 (7/98 revision)
   ii. Key Parameters: Monthly fuel use (scf) and average fuel gas heat content

8. Zone D SRU Incinerator

   a. SO\textsubscript{2}: Calculation Basis: CEMS data and methodology required in Billings/Laurel SO\textsubscript{2} SIP

   b. NO\textsubscript{x}

      i. Calculation Basis: Emission factors based on annual stack tests
      ii. Key Parameters: Annual NO\textsubscript{x} stack test, monthly fuel use (scf)

   c. CO, PM\textsubscript{10}/PM, VOC: Not applicable – not a significant source

9. Wastewater

   a. VOC

      i. Calculation Basis: AP-42, Table 5.1-2 (1/95 rev.)
      ii. Key Parameters: Monthly wastewater flow (gal) from Lab Information Management System (LIMS)

10. Cooling towers

    a. VOC

       i. Calculation Basis: AP-42, Section 5.1 (1/95 rev.)
       ii. Key Parameters: Monthly cooling tower circulation (gal)

11. Loading facilities

    a. NO\textsubscript{x}

       i. Calculation Basis: VCU stack tests for lb NO\textsubscript{x}/gal loaded
       ii. Key Parameters: Monthly volume of materials loaded from yield accounting

    b. CO

       i. Calculation Basis: VCU stack tests for lb CO/gal loaded
       ii. Key Parameters: Monthly volume of materials loaded from yield accounting

    c. VOC

       i. Calculation Basis: AP-42, Section 5.2-4 (1/95 rev.) and VCU stack tests for lb VOC/gal loaded
ii. Key Parameters: Monthly volume of material throughput from yield accounting, material property data (VP, MW, etc.)

12. Storage tanks

   a. VOC

      i. Calculation Basis: AP-42 Calculation Methods
      ii. Key Parameters: Monthly volume of material throughput from yield accounting, material property data (VP, MW, etc.)

CHS shall utilize the established specific calculation methods for each source in determining compliance with the annual plant-wide emission limitations. If an improved calculation methodology is identified and approved by the Department, the emission limitation for that pollutant(s) shall be reviewed and updated, if needed, before the new calculation method is utilized (ARM 17.8.749).

B.13. In addition to the testing required in each section, compliance monitoring for the emission limits applicable to the fuel gas combustion devices shall be based upon actual fuel burning rates and the emission factors developed from the most recent compliance source test, and/or available CEM data. Fuel flow rates, fuel heating value, production information and other data, as needed, shall be recorded for each emitting unit during the performance of the source tests in order to develop emission factors for use in the compliance determinations. New emission factors (subject to review and approval by the Department) shall become effective within 60 days after the completion of a source test (ARM 17.8.749).

B.14. CHS may fire only natural gas in fuel gas combustion devices as one of the means to demonstrate compliance with applicable VOC limits (as shown in recordkeeping and reporting) (ARM 17.8.1213).

B.15. Compliance with the SIP SO₂ emission limitations contained in Section III.B.7, III.B.8, and III.B.9 shall be monitored by summing the hourly SO₂ emission rates for listed fuel gas combustion sources, and using the result to calculate the corresponding emission rate for each of the averaging periods (for which an emission limit in Section III.B.7, III.B.8, and III.B.9 applies) determined in accordance with Exhibit A, Section 6(F).

The hourly SO₂ emission rate for the listed fuel gas combustion units shall be determined by using the H₂S concentrations and fuel gas flow rates measured by the CEMS required by Exhibit A, Section 6(B)(3) and (4) and the sampling required by Exhibit A, Section 6(B)(3). All calculations shall be made in accordance with the appropriate equation(s) in Exhibit A, Section 2(A)(1), (7), (9), and (14), except when CEMS data is not available as provided in Exhibit A, Section 2(A)(14) of the Stipulation (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002 and May 22, 2003).

B.16. CHS shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart J - Standards of Performance for Petroleum Refineries. These regulations shall apply to refinery fuel gas fired units and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart J).
B.17. CHS shall operate and maintain a continuous H\textsubscript{2}S concentration monitor(s) (dry basis), including a data acquisition system, to monitor and record the H\textsubscript{2}S concentration of all refinery fuel gas burned at the refinery, with the exception of refinery fuel gas streams with approved Alternative Monitoring Plans (AMP) or AMPs under review; or any unit with SO\textsubscript{2}/O\textsubscript{2} CEMS, as specified under the individual emitting unit (ARM 17.8.749, ARM 17.8.340 and 40 CFR 60 Subpart J, and Billings/Laurel SO\textsubscript{2} Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.18. Compliance monitoring for SO\textsubscript{2} limits for refinery fuel gas-fired units shall be based upon monitor data for H\textsubscript{2}S, as required in Section III.B.17 and refinery fuel gas-firing rates, with the exception of refinery fuel gas streams with approved AMPs or AMPs under review; or any unit with SO\textsubscript{2}/O\textsubscript{2} CEMS, as specified under the individual emitting unit (ARM 17.8.749, ARM 17.8.340 and 40 CFR 60 Subpart J, and Billings/Laurel SO\textsubscript{2} Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.19. Certification of the H\textsubscript{2}S in refinery fuel gas in parts per million (ppm) shall be demonstrated by performance of annual source testing using EPA-approved methods (40 CFR 60, Appendix A, Method 11) or an equivalent method approved by the Department and EPA, and in accordance with Section III.A.2 (ARM 17.8.106) and/or determined by using the H\textsubscript{2}S concentrations and fuel gas flow rates measured by the CEMS where otherwise required (ARM 17.8.1213 and Billings/Laurel SO\textsubscript{2} Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.20. Within 4 hours of the initial determination that the H\textsubscript{2}S concentration in the refinery fuel gas stream has exceeded the upper range of the CEMS, CHS shall initiate sampling of the fuel gas stream on a once-per-3-hour period frequency using the Tutwiler method (40 CFR Part 60.648), or another method approved by the Department and EPA to determine the H\textsubscript{2}S concentration (Billings/Laurel SO\textsubscript{2} Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.21. CHS shall operate and maintain a continuous fuel gas flow rate meter, including a data acquisition system, to monitor and record the fuel flow rate of all refinery fuel gas burned (ARM 17.8.749, and Billings/Laurel SO\textsubscript{2} Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.22. Refinery fuel gas flow rate monitor accuracy determinations shall be required at least once every 48 months or more frequently as routine refinery turn-arounds allow (Billings/Laurel SO\textsubscript{2} Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.23. CEMS 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 CEMS is unable to meet minimum availability requirements, the recipient shall provide a back-up or alternative monitoring system and plan such that continuous compliance can be demonstrated (ARM 17.8.749).

B.24. CEMS and Continuous Emissions Rate Monitoring System (CERMS) required by this permit shall comply with all applicable provisions of 40 CFR 60.5 through 60.13, Subparts J,
60.100-108 and Appendix B, Performance Specifications 2, 3, and 7 and Appendix F; and 40 CFR 52, Appendix E, for certifying Volumetric Flow Rate Monitors (ARM 17.8.749).

B.25. All gaseous (SO2 and H2S) 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 7 (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

a. For the FCC Regenerator stack SO2 CEMS, Zone A SRU TGI stack CEMS, and Zone D SRU TGI stack CEMS, 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).

b. For the Refinery Fuel Gas Combustion Unit CEMS:

i. If the 3-hour emissions from the refinery fuel gas combustion units never exceed 300 pounds at any time during a calendar quarter, or if the only exceedances are caused by malfunctions, CHS shall achieve a quarterly data recovery rate (QDRR) for each pair of H2S concentration and refinery fuel gas flow rate monitors of at least 90%; or

ii. If the 3-hour emissions from the refinery fuel gas combustion units exceed 300 pounds at any time during a calendar quarter, and one or more of the exceedances are not caused by a malfunction, CHS shall achieve a quarterly data recovery rate (QDRR) for each pair of H2S concentration and refinery fuel gas flow rate monitors of at least 94%.

Recordkeeping

B.26. 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.27. CHS shall maintain, under CHS's control, all records required for compliance demonstration as described in the compliance demonstration sections (ARM 17.8.1212).

Reporting

B.28. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

B.29. CHS shall notify the Department in writing of each source test a minimum of 25 working days prior to the actual testing, unless otherwise specified by the Department (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.30. CHS shall submit quarterly emission reports to the Department within 30 days of the end of each calendar quarter. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or uploaded to the State of Montana's File.
Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service). The report shall include the following (ARM 17.8.749):

a. Compliance status with emission limits in Sections III.B.1 through III.B.6 using data required in Section III.B.12 and III.B.13;

b. 24-hour (daily) average concentration of H₂S in the refinery fuel gas burned at the permitted facilities;

c. Unit operating times during the reporting period;

d. CEMS monitoring downtime that occurred during the reporting period;

e. A summary of excess emissions or applicable concentrations for each pollutant and the averaging period;

f. Compliance determinations for hourly, 24-hour, and annual limits;

g. Reasons for any emissions in excess of those specifically allowed with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation; and

h. For those refinery fuel gas streams covered by AMPs, the report should identify instances where AMP conditions were not met.

B.31. In accordance with Section 7 of the Stipulation (Appendix F of this permit), CHS 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 Division office in Helena and the Regional Office from which the Compliance Officer assigned to this facility is based. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002 and May 22, 2003 and ARM 17.8.1212).

B.32. 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.33. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. Summary of compliance with emission limits and dates that quarterly reports were submitted as required by Section III.B.30 for the reporting period;

c. Summary of compliance with Stipulation limits and dates that quarterly reports were submitted as required by Section III.B.31 for the reporting period;
d. Summary of compliance with applicable requirements for 40 CFR 60 Subpart J (refinery fuel gas combustion) during the reporting period;

C. EU002 – # 1 Crude Unit and Naphtha Splitter
   # 1 Crude Unit Preheater (CV-HTR-1), # 1 Crude Unit Main Heater (CV-HTR-2), # 1 Crude Unit Vacuum Heater (CV-HTR-4), and Low Pressure Vapor Recovery Compressor (C-401).

<table>
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<tr>
<th>Condition(s)</th>
<th>Pollutant/Parameter</th>
<th>Permit Limit</th>
<th>Compliance Method</th>
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<td>C.1, C.9, C.15, C.20, C.21, C.22</td>
<td># 1 Crude Unit - Opacity</td>
<td>40%</td>
<td>Method 9</td>
<td>As Required by the Department and Section III.A.1</td>
<td>Semiannually</td>
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<tr>
<td>C.2, C.9, C.15, C.20, C.21, C.22</td>
<td>Naphtha Splitter - Opacity</td>
<td>20%</td>
<td>Method 9</td>
<td>As Required by the Department and Section III.A.1</td>
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<tr>
<td>C.8, C.14, C.19, C.21, C.22</td>
<td>CV-HTR-4</td>
<td>40 CFR 60 Subpart Ja (H₂S in fuel gas only)</td>
<td>40 CFR 60 Subpart Ja (H₂S in fuel gas only)</td>
<td>40 CFR 60 Subpart Ja</td>
<td>40 CFR 60 Subpart Ja</td>
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</tbody>
</table>

Conditions

C.1. CHS 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 (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

C.2. CHS 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 (ARM 17.8.304(2)).
C.3. CHS shall comply with all applicable requirements of 40 CFR 60 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 compliance with specific requirements in Subpart VVa-Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006. Subpart GGGa applies to the #1 Crude Unit fugitive piping equipment in VOC service and to the Low Pressure Vapor Recovery Compressor (C-401), as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).

C.4. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart CC, NESHAPs From Petroleum Refineries, including compliance with specific requirements in Subpart VV- Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart CC applies to the various pumps, valves, flanges, and other equipment in organic Hazardous Air Pollutant (HAP) service within the #1 Crude Unit and to the Low Pressure Vapor Recovery Compressor (C-401) (ARM 17.8.342 and 40 CFR 63 Subpart CC).

C.5. The #1 Crude Unit shall be maintained and operated as per the Leak Detection and Repair (LDAR) Program. The LDAR program would apply to all new equipment in both HAP and non-HAP VOC service in the #1 Crude Unit, as well as equipment in VOC service constructed or modified since January 4, 1983. The LDAR program would not apply to existing equipment in non-HAP service undergoing retrofit measures (ARM 17.8.749).

C.6. CHS shall monitor and maintain all pumps, shutoff valves, relief valves and other piping and valves associated (as defined above) with the #1 Crude Unit as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.752; ARM 17.8.342; and 40 CFR 63 Subpart CC).

C.7. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

C.8. CHS shall comply with the applicable requirements of 40 CFR 60 Subpart Ja – Standards of Performance for Petroleum Refineries. This regulation shall apply to the CV-HTR-4 (H2S in fuel gas requirements only and not NOx requirements) (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

Compliance Demonstration

C.9. As required by the Department and Section III.A.1, compliance with the opacity limitations listed in Section III.C.1 and III.C.2 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).


C.11. CHS shall institute a monitoring and maintenance program, as described under 40 CFR 60 Subpart VVa, and meeting the requirements of 40 CFR 60 Subpart GGGa (ARM 17.8.340, ARM 17.8.752, 40 CFR 60 Subpart GGGa).
C.12. CHS shall maintain records, under CHS’s control, of monitoring and maintenance activities on all applicable pumps, shutoff valves, relief valves and other piping and valves as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.340 and 40 CFR 60 Subpart GGG, ARM 17.8.342 and 40 CFR 63 Subpart CC).

C.13. CHS shall demonstrate compliance with 40 CFR 63 Subpart DDDDD as required by Subpart DDDDD including maintaining on-site an annual report containing the information required in 40 CFR 63.7540 (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

C.14. CHS shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart Ja, Standards of Performance for Petroleum Refineries. These regulations shall apply to the #1 Crude Vacuum Heater (CV-HTR-4) (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

**Recordkeeping**

C.15. 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.16. CHS shall conduct recordkeeping in accordance with the requirements of 40 CFR 63 Subpart CC (40 ARM 17.8.342 and 40 CFR 63 Subpart CC).

C.17. CHS shall comply with the recordkeeping and reporting requirements contained in 40 CFR 60 Subpart VVa (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).

C.18. CHS shall maintain records as required by 40 CFR 63 Subpart DDDDD.

C.19. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart Ja (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

**Reporting**

C.20. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

C.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).

C.22. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

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

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

d. Summary of compliance with 40 CFR 63 Subpart DDDDD during the reporting period. This reporting requirement does not require the permittee to submit any report or compliance status determination earlier than is required by 40 CFR 63 Subpart DDDDD.

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

**D. EU003 – #2 Crude Unit**

*# 2 Crude Unit Main Heater (2CV-HTR-1), #2 Crude Unit Vacuum Heater (2CV-HTR-2)*

<table>
<thead>
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<th>Permit Limit</th>
<th>Compliance Demonstration Method</th>
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<tr>
<td>D.1, D.5, D.9, D.12, D.13, D.14</td>
<td>Opacity</td>
<td>40%</td>
<td>Method 9</td>
<td>As Required by the Department and Section III.A.1</td>
<td>Semiannually</td>
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<tr>
<td>D.2, D.6, D.7, D.10, D.13, D.14</td>
<td>#2 Crude Unit</td>
<td>40 CFR 60 Subpart GGG</td>
<td>Subpart VV</td>
<td>Subpart VV</td>
<td>Semiannually and 40 CFR 60 Subpart GGG</td>
</tr>
</tbody>
</table>

**Conditions**

D.1. CHS 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 (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60
consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

D.2. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart GGG—Equipment Leaks of VOC in Petroleum Refineries, including compliance with specific requirements in Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart GGG applies to the various pumps, valves, flanges, and other equipment in VOC service within the #2 Crude Unit (ARM 17.8.340 and 40 CFR 60 Subpart GGG).

D.3. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart CC, NESHAPs From Petroleum Refineries, including compliance with specific requirements in 40 CFR 60 Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart CC applies to the various pumps, valves, flanges, and other equipment in organic HAP service within the #2 Crude Unit (ARM 17.8.342 and 40 CFR 63 Subpart CC).

D.4. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

Compliance Demonstration

D.5. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.D.1 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).


D.7. CHS shall maintain records, under CHS’s control, of monitoring and maintenance activities on all applicable pumps, shutoff valves, relief valves and other piping and valves as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.340 and 40 CFR 60 Subpart GGG, and ARM 17.8.342 and 40 CFR 63 Subpart CC).

D.8. CHS shall demonstrate compliance with 40 CFR 63 Subpart DDDDD as required by Subpart DDDDD including maintaining on-site an annual report containing the information required in 40 CFR 63.7540 (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

Recordkeeping

D.9. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

D.10. CHS shall conduct recordkeeping in accordance with 40 CFR 60 Subpart GGG and 40 CFR 63 Subpart CC, including recordkeeping for equipment leaks performed in accordance with 40 CFR 60.486, and 40 CFR 63.654 (ARM 17.8.340; 40 CFR 60 Subpart GGG; ARM 17.8.342 and 40 CFR 63 Subpart CC).
D.11. CHS shall maintain records as required by 40 CFR 63 Subpart DDDDD.

Reporting

D.12. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

D.13. 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.14. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

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

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

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

E. EU004 – PDA Unit – Shutdown (no longer in service)
F. EU005 — Naphtha Hydrotreating Unit

NHT Reboiler Heater #1 (H-8302); NHT Reboiler Heater #2 (H-8303); NHT Splitter Reboiler Heater (H-8304); NHT Charge Heater (H-8301)(formerly MDU Charge Heater), Makeup Hydrogen Compressor (C-8302A) and Recycle Hydrogen Compressor (C-8302B).

Removed per MAQP 1821-13: #2 Naphtha Unifiner Charge, Reboiler Heater (#2 NU Heater); #1 Unifiner Compressor Engine, #2 Unifiner Compressor Engine

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<tr>
<td>F.5, F.13, F.14, F.21, F.26, F.27</td>
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<td>F.6, F.15, F.23, F.25, F.26, F.27</td>
<td>NHT Charge Heater - SO₂</td>
<td>1.54 tons / 12-month rolling and 0.70 lb/hr</td>
<td>RFG H₂S CEMS, see Section B.</td>
<td>Annual</td>
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<tr>
<td>F.7, F.16, F.19, F.24, F.25, F.26, F.27</td>
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<td>6.55 tons / 12-month rolling and 1.50 lb/hr</td>
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<tr>
<td>F.8, F.16, F.19, F.24, F.25, F.26, F.27</td>
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<td>Method 10</td>
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<tr>
<td>F.9, F.17, F.23, F.25, F.26, F.27</td>
<td>NHT Charge Heater - VOC</td>
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<td>Emission calculations, see Section B.</td>
<td>Annual</td>
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<tr>
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<td>NHT Charge Heater</td>
<td>No fuel oil Recordkeeping</td>
<td>On-going</td>
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**Conditions**

F.1. CHS 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 (ARM 17.8.304(1)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

F.2. CHS 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 (ARM 17.8.304(2) – applicable to the NHT Charge Heater).

F.3.  CHS shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

F.4.  CHS shall comply with all applicable requirements of 40 CFR 60 Subpart GGG—Equipment Leaks of VOC in Petroleum Refineries, including compliance with specific requirements in Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart GGG applies to the various pumps, valves, flanges, and other equipment in VOC service within the Naphtha Hydrotreating Unit. The C-8302A and C-8302B compressors are subject to Subpart GGG as compressors in hydrogen service (ARM 17.8.340 and 40 CFR 60 Subpart GGG).

F.5.  CHS shall comply with all applicable requirements of 40 CFR 63 Subpart CC, NESHAPs From Petroleum Refineries, including compliance with specific requirements in Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart CC applies to the various pumps, valves, flanges, and other equipment in organic HAP service within the Naphtha Hydrotreating Unit (ARM 17.8.342 and 40 CFR 63 Subpart CC).

F.6.  CHS shall not cause or authorize SO₂ emissions from the NHT Charge Heater (H-8301) to exceed 1.54 tons per rolling 12-calendar months or 0.70 lb/hr (ARM 17.8.752).

F.7.  CHS shall not cause or authorize NOₓ emissions from the NHT Charge Heater (H-8301) to exceed 6.55 tons per rolling 12-calendar months or 1.50 lb/hr (ARM 17.8.752).

F.8.  CHS shall not cause or authorize CO emissions from the NHT Charge Heater (H-8301) to exceed 400 ppmvd at 3% O₂ on a 30-day rolling average (ARM 17.8.752).

F.9.  CHS shall not cause or authorize VOC emissions from the NHT Charge Heater (H-8301) to exceed 0.86 tons per rolling 12-calendar months (ARM 17.8.752).


Compliance Demonstration

F.11. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.F.1 & F.2 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

F.12. CHS shall demonstrate compliance with 40 CFR 63 Subpart DDDDD as required by Subpart DDDDD including maintaining on-site an annual report containing the information required in 40 CFR 63.7540 (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

F.14. CHS shall maintain records, under CHS’s control, of monitoring and maintenance activities on all applicable pumps, shutoff valves, relief valves and other piping and valves as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.340 and 40 CFR 63 Subpart CC).

F.15. CHS shall monitor compliance with the SO2 limits for the NHT Charge Heater listed in Section III.F.6 through monitoring the volume and H2S concentration of refinery fuel gas combusted, as specified in Section III.B (ARM 17.8.1213).

F.16. CHS shall test the NHT Charge Heater (H-8301) every 2 years, or according to another testing/monitoring schedule as may be approved by the Department, for NOx and CO, concurrently, and the results submitted to the Department in order to monitor compliance with the NOx and CO emission limits contained in Sections III.F.7 & III.F.8 (ARM 17.8.105 and ARM 17.8.749).

F.17. CHS shall monitor compliance with the VOC limit for the NHT Charge Heater listed in Section III.F.9 through maintaining records of the fuel gas consumed and using the emission factor as specified in Section III.B (ARM 17.8.1213).

F.18. Compliance with Section III.F.10 shall be monitored by not firing fuel oil in this unit (ARM 17.8.1213).

Recordkeeping

F.19. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

F.20. CHS shall maintain records as required by 40 CFR 63 Subpart DDDDD (ARM 17.8.342, 40 CFR 63 Subpart DDDDD, and ARM 17.8.1212).

F.21. CHS shall conduct recordkeeping in accordance with 40 CFR 60 Subpart GGG and 40 CFR 63 Subpart CC, including recordkeeping for equipment leaks performed in accordance with 40 CFR 60.486 and 40 CFR 63.648, as appropriate (ARM 17.8.340; 40 CFR 60 Subpart GGG; ARM 17.8.342 and 40 CFR 63 Subpart CC).

F.22. CHS shall maintain records of fuel type fired in this unit to document compliance with Section III.F.18 (ARM 17.8.1213).

F.23. CHS shall maintain records of fuel gas consumed in the NHT Charge Heater (ARM 17.8.1212).

Reporting

F.24. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

F.25. CHS shall submit quarterly emissions reports to the Department within 30 days of the end of each reporting period. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or up-loaded to the State of Montana’s File.
Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service). The report shall include the following (ARM 17.8.749):

a. Source or unit operating time during the reporting period;

b. Quarterly fuel gas consumption rates during the reporting period;

c. A summary of excess emissions or applicable concentrations for each pollutant and the averaging period identified in Section III.F.6, Section III.F.7, Section III.F.8, and Section III.F.9 during the reporting period;

d. Compliance determinations for limits specifically allowed in Section III.F.6, Section III.F.7, Section III.F.8, and Section III.F.9 during the reporting period;

e. Reasons for any emissions in excess of those specifically allowed in Section III.F.6, Section III.F.7, Section III.F.8, and Section III.F.9, with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

F.26. 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.27. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. Statement that no fuel oil was burned in the NHT Charge Heater, or dates that noncompliance occurred;

c. Dates that quarterly reports were submitted as required by Section III.F.25

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

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

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

G. EU006 – Middle Distillate Unifiner — *Shutdown – not in operation*
H. EU007 – Platformer Unit, including the Benzene Reduction Unit
*Platformer Heater (P-HTR-1), Platformer Debutanizer Reboiler Heater (P-HTR-2), Platformer Splitter Reboiler (P-HTR-3), Benzene Reduction Unit Oily Water Sewer*

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<th>Compliance Demonstration Method</th>
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<td>H.1, H.16, H.28, H.36 H.38, H.39</td>
<td>Opacity</td>
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<td>Method 9</td>
<td>As Required by the Department and Section III.A.1</td>
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<td>40 CFR 60 Subpart GGGa</td>
<td>Semiannually and 40 CFR 60 Subpart GGGa</td>
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<tr>
<td>H.7, H.23, H.35, H.37, H.38, H.39</td>
<td>Platformer Splitter Reboiler (P-HTR-3) SO₂</td>
<td>≤ 60 ppm H₂S in refinery fuel gas, 365-day rolling average; 1.8 tons/rolling 12-calendar month; 0.72 lb/hour</td>
<td>RFG H₂S CEMS, see Section B.</td>
<td>Annual</td>
<td>Quarterly</td>
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<tr>
<td>Condition(s)</td>
<td>Pollutant/Parameter/Unit</td>
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<td>H.8, H.24, H.28, H.36, H.38, H.39</td>
<td>Platformer Splitter Reboiler (P-HTR-3) NOx</td>
<td>≤ 6.99 tons/rolling 12-calendar month; 1.60 lb/hour</td>
<td>Method 7</td>
<td>Every 5-years</td>
<td>Initially; Thereafter, As Required by the Department and Section III.A.1</td>
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<td>H.10, H.25, H.35, H.38, H.39</td>
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<td>≤ 1.31 tons/rolling 12-calendar month; 0.30 lb/hour</td>
<td>Emission calculations, see Section B.</td>
<td>Annual</td>
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<td>H.11, H.25, H.35, H.38, H.39</td>
<td>Platformer Splitter Reboiler (P-HTR-3) VOC</td>
<td>≤ 0.64 tons/rolling 12-calendar month</td>
<td>Emission calculations, see Section B.</td>
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<td>Fitted with ULNBs</td>
<td>Written Notification</td>
<td>Within 15 days of actual installation</td>
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<tr>
<td>H.14, H.27, H.34, H.38, H.39</td>
<td>Benzene Reduction Project Drains</td>
<td>All new drains will be routed to the sewer system that is subject to NSPS Subpart QQQ compliance and all such drains will be treated as subject to NSPS Subpart QQQ requirements</td>
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<td>40 CFR 60 Subpart QQQ</td>
<td>Quarterly</td>
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<tr>
<td>Condition(s)</td>
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<td>Permit Limit</td>
<td>Compliance Demonstration Method</td>
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<tr>
<td>H.15, H.27, H.34, H.38, H.39</td>
<td>Benzene Reduction Project Junction Boxes/Vessels</td>
<td>All new junction boxes/vessels will be either water sealed, equipped with vent pipes meeting NSPS Subpart QQQ standards, or equipped with closed vent systems and control devices that are designed and operated to meet the control requirements of NSPS Subpart QQQ</td>
<td>40 CFR 60 Subpart QQQ</td>
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Conditions

H.1. CHS 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 (ARM 17.8.304(2)). This applies to the sources in the Benzene Reduction Unit. During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

H.2. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD):

H.3. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart CC, NESHAPs for Petroleum Refineries, including compliance with specific requirements in Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart CC applies to the various pumps, valves, flanges, and other equipment in organic HAP service within the Platformer Unit including the Benzene Reduction Unit (ARM 17.8.342 and 40 CFR 63 Subpart CC).

H.4. The Platformer Unit is a catalytic reforming unit subject to 40 CFR 63 Subpart UUU, NESHAPs for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units. CHS shall comply with all applicable requirements of Subpart UUU for the Platformer Unit (ARM 17.8.342; 40 CFR 63 Subpart UUU).

H.5. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart GGGa—Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006. This applies to the Benzene Reduction Unit (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).
H.6. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart Ja – Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007, including the Platformer Splitter Reboiler. This heater is subject to the \(\text{H}_2\text{S}\) in fuel gas limit but is not subject to process heater NOx requirements because it is rated less than 40 MMBtu/hr (ARM 17.8.340; 40 CFR 60 Subpart Ja).

H.7. \(\text{SO}_2\) emissions from the Platformer Splitter Reboiler (P-HTR-3) shall not exceed 60 ppmv \(\text{H}_2\text{S}\) in refinery fuel gas, 365-day rolling average for the Platformer Splitter Reboiler (ARM 17.8.752, ARM 17.8.340, and 40 CFR 60 Subpart Ja), 1.18 tons/rolling 12-calendar month total (ARM 17.8.749), and 0.72 lbs/hour (ARM 17.8.749).

H.8. \(\text{NO}_x\) emissions from the Platformer Splitter Reboiler (P-HTR-3) shall not exceed 6.99 tons/rolling 12-calendar month total (ARM 17.8.749) and 1.60 lb/hour (ARM 17.8.752).

H.9. \(\text{CO}\) emissions from the Platformer Splitter Reboiler (P-HTR-3) shall not exceed 13.62 tons/rolling 12-calendar month total (ARM 17.8.749) and 3.11 lb/hour (ARM 17.8.752).

H.10. \(\text{PM/PM}_{10}\) emissions from the Platformer Splitter Reboiler (P-HTR-3) shall not exceed 1.31 tons/rolling 12-calendar month total (ARM 17.8.749) and 0.30 lb/hour (ARM 17.8.752).

H.11. VOC emissions from the Platformer Splitter Reboiler (P-HTR-3) shall not exceed 0.64 tons/rolling 12-calendar month total (ARM 17.8.752).

H.12. The Platformer Splitter Reboiler (P-HTR-3) shall be fitted with ULNBs (ARM 17.8.752).

H.13. The heat input rate for the Platformer Splitter Reboiler (P-HTR-3) shall not exceed 39.9 MMBtu-HHV/hr (ARM 17.8.749).

H.14. All new drains associated with the benzene reduction project will be routed to the sewer system that is NSPS Subpart QQQ compliant and all such drains will be treated as subject to NSPS Subpart QQQ requirements (ARM 17.8.752, ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

H.15. All new junction boxes/vessels constructed as part of the benzene reduction project will be either water sealed, equipped with vent pipes meeting NSPS Subpart QQQ standards (applicable to new junction boxes), or equipped with closed vent systems and control devices that are designed and operated to meet the control requirements of NSPS Subpart QQQ (ARM 17.8.752, ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

Compliance Demonstration

H.16. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.H.1 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).
H.17. CHS shall demonstrate compliance with 40 CFR 63 Subpart DDDDD as required by Subpart DDDDD including maintaining on-site an annual report containing the information required in 40 CFR 63.7540 (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

H.18. CHS shall institute a monitoring and maintenance program in accordance with 40 CFR 60 Subpart VV as required by 40 CFR 63 Subpart CC (ARM 17.8.342 and 40 CFR 63 Subpart CC).

H.19. CHS shall maintain records, under CHS’s control, of monitoring and maintenance activities on all applicable pumps, shutoff valves, relief valves and other piping and valves associated with the Platformer Unit, as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.340 and 40 CFR 60 Subpart CC).

H.20. CHS shall conduct all monitoring and testing as required by 40 CFR 63 Subpart UUU, including maintaining records to document conformance with procedures in CHS’s required operation, maintenance and monitoring plan (ARM 17.8.742 and 40 CFR 63 Subpart UUU).

H.21. CHS shall demonstrate compliance in accordance with 40 CFR 60 Subpart GGGa, to monitor compliance with Section III.H.5 (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).

H.22. CHS shall demonstrate compliance in accordance with 40 CFR 60 Subpart Ja, to monitor compliance with Section III.H.6 (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

H.23. CHS shall monitor compliance with the SO2 limits for the Platformer Splitter Reboiler (P-HTR-3) listed in Section III.H.7 through monitoring the volume and H2S concentration of refinery fuel gas combusted, as specified in Section III.B (ARM 17.8.1213).

H.24. As required by the Department, the Platformer Splitter Reboiler (P-HTR-3) shall be tested for NOx and CO, concurrently, every five years from the date of the last source test and the results submitted to the Department (ARM 17.8.105 and ARM 17.8.749).

H.25. CHS shall monitor compliance with the PM/PM10 and VOC limits for the Platformer Splitter Reboiler (P-HTR-3) listed in Sections III.H.10 and III.H.11 through maintaining records of the fuel gas consumed and using the emission factor as specified in Section III.B (ARM 17.8.1213).

H.26. CHS shall maintain records for the Platformer Splitter Reboiler (P-HTR-3) heat input limit, based on fuel gas flow rate monitoring and fuel analysis (ARM 17.8.749). This information shall be used to verify compliance with the limitation in Sections III.H.13 (ARM 17.8.1213).

H.27. CHS shall meet the requirements of all applicable testing and procedures of 40 CFR 60 Subpart QQQ-Standards of Performance for VOC Emissions. These regulations shall apply to the Benzene Reduction Unit Oily Water Sewer, and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart QQQ, ARM 17.8.1213).

Recordkeeping

H.28. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).
H.29. CHS shall maintain records as required by 40 CFR 63 Subpart DDDDD (ARM 17.8.342, 40 CFR 63 Subpart DDDDD, and ARM 17.8.1212).

H.30. CHS shall conduct recordkeeping in accordance with 40 CFR 63 Subpart CC, including recordkeeping for equipment leaks performed in accordance with 40 CFR 60.486 and 40 CFR 63.648, as appropriate (ARM 17.8.342 and 40 CFR 63 Subpart CC).

H.31. CHS shall conduct recordkeeping for monitoring, testing, and documenting compliance in accordance with 40 CFR 63 Subpart UUU (ARM 17.8.342 and 40 CFR 63 Subpart UUU).

H.32. CHS shall conduct recordkeeping for monitoring, testing, and documenting compliance in accordance with 40 CFR 60 Subpart GGGa (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).

H.33. CHS shall conduct recordkeeping for monitoring, testing, and documenting compliance in accordance with 40 CFR 60 Subpart Ja (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

H.34. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart QQQ (ARM 17.8.340 and 40 CFR 60 Subpart QQQ, ARM 17.8.1212).

H.35. The records required by Section III.H.23, Section III.H.25 and Section III.H.26 shall be maintained onsite (ARM 17.8.1212).

**Reporting**

H.36. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

H.37. CHS shall prepare and submit a quarterly emission report within 30 days of the end of each calendar quarter. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or up-loaded to the State of Montana’s File Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service). The quarterly report shall also include the following (ARM 17.8.749):

a. SO₂ emission data from the refinery fuel gas system continuous H₂S concentration monitor required by Section III.B. The SO₂ emission rates from the Platformer Splitter Reboiler (P-HTR-3) shall be reported for the following averaging periods:

i. Average lb/hr per calendar month

ii. Total lb per calendar day

iii. Total tons per month

H.38. 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.39. The semiannual reporting shall provide (ARM 17.8.1212):
a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. A summary of the fuel usage and emissions factors utilized for compliance monitoring of Section III.H.10, with the highest ton/rolling 12 month period emissions rate, and highest lb/hr emissions rate during the reporting period noted, or if noncompliance occurred, the month and hourly emissions rates and timeframes of noncompliance noted;

c. A summary of the fuel usage and emissions factors utilized for compliance monitoring of Section III.H.11, with the highest ton/rolling 12 month period emissions rate, and highest lb/hr emissions rate during the reporting period noted, or if noncompliance occurred, the month and hourly emissions rates and timeframes of noncompliance noted during the reporting period;

d. A summary of the heat input rate records as required by Section III.H.26 during the reporting period, which shall include the highest heat input rate recorded during the reporting period, or if noncompliance is indicated, the heat input rates and timeframes of noncompliance;

e. Dates that quarterly reports were submitted as required by Section III.H.37;

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

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

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

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

j. Summary of compliance with the reporting requirements of 40 CFR 63 Subpart UUU during the reporting period. This reporting requirement does not require the permittee to submit any report or compliance status determination earlier than is required by 40 CFR 63 Subpart UUU;
k. Summary of compliance with the reporting requirements of 40 CFR 60 Subpart Ja during the reporting period. This reporting requirement does not require the permittee to submit any report or compliance status determination earlier than is required by 40 CFR 60 Subpart Ja;

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

I. **EU008 – Fluid Catalytic Cracking Unit (FCCU)**

*FCC Charge Heater (FCC-Htr-1), FCC Regenerator (FCC-VSSL-1)*

Note: In the renewal and issuance of #OP1821-18, the CO\textsubscript{2}e limit shared by the FCCU regenerator and the Hydrogen Reformer Heater (067HT0001) was added in Section III.Z.

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<tr>
<td>L1, L27, L28, L31, L48, L52, L60, L62, L63</td>
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<td>30%</td>
<td>COMs</td>
<td>Ongoing</td>
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<td>I.7, L27, L32, L33, L34, L36, L37, L48, L52, L57, L58, L59, L61, L62, L63</td>
<td>SIP: SO\textsubscript{2}</td>
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<td>CEMS</td>
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<td>SIP: SO\textsubscript{2}</td>
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<td>CEMS</td>
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<td>Condition(s)</td>
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<td>Method 6/6c</td>
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<td>I.10, I.27, I.32, I.33, I.34, I.36, I.37, I.48, I.52, I.57, I.60, I.61, I.62, I.63</td>
<td>SO₂ from FCC Regenerator</td>
<td>50 ppm at 0% O₂/7-day rolling average and 25 ppm at 0% O₂/365-day rolling average</td>
<td>CEMS</td>
<td>Ongoing</td>
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<td>Method 6/6c</td>
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<td>Quarterly</td>
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<td>I.11, I.18, I.27, I.28, I.29, I.34, I.38, I.48, I.52, I.57, I.58, I.59, I.60, I.61, I.62, I.63</td>
<td>CO from FCC Regenerator</td>
<td>500 ppm at 0% O₂/1-hr</td>
<td>CEMS</td>
<td>Ongoing</td>
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<td>Method 10</td>
<td>Annually</td>
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<td>I.12, I.18, I.27, I.28, I.29, I.34, I.38, I.48, I.52, I.57, I.58, I.59, I.60, I.61, I.62, I.63</td>
<td>CO from FCC Regenerator</td>
<td>100 ppm at 0% O₂/rolling 365-days</td>
<td>CEMS</td>
<td>Ongoing</td>
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<td>Method 10</td>
<td>Annually</td>
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<td>I.13, I.27, I.34, I.35, I.36, I.38, I.48, I.52, I.57, I.58, I.59, I.60, I.62, I.63</td>
<td>NOₓ from FCC Regenerator</td>
<td>65.1 ppm at 0% O₂/rolling 365-days</td>
<td>CEMS</td>
<td>Ongoing</td>
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<td>Method 7e</td>
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<td>Quarterly</td>
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<td>CEMS</td>
<td>Ongoing</td>
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<td>Condition(s)</td>
<td>Pollutant/Parameter</td>
<td>Permit Limit</td>
<td>Compliance Demonstration</td>
<td>Reporting Requirements</td>
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<td>I.14, I.27, I.34, I.35, I.36, I.38, I.48, I.52, I.57, I.58, I.59, I.60, I.62, I.63</td>
<td>NO&lt;sub&gt;x&lt;/sub&gt; from FCC Regenerator</td>
<td>102 ppm at 0% O&lt;sub&gt;2&lt;/sub&gt;/rolling 7-days</td>
<td>Method 7e</td>
<td>Annually</td>
<td></td>
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<td>I.15, I.27, I.28, I.34, I.35, I.36, I.38, I.48, I.52, I.57, I.58, I.59, I.60, I.62, I.63</td>
<td>NO&lt;sub&gt;x&lt;/sub&gt; from FCC Regenerator</td>
<td>117 tons/rolling 12-months</td>
<td>CEMS</td>
<td>Ongoing</td>
<td></td>
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<tr>
<td>I.16, I.2, I.28, I.42, I.48, I.49, I.57, I.58, I.62, I.63</td>
<td>PM from FCCU</td>
<td>1.0 lb PM/1000 lb coke burned</td>
<td>Operate and maintain ESP</td>
<td>Method 5B/5F</td>
<td>Every 3-years</td>
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<tr>
<td>I.17, I.42, I.48, I.57, I.58, I.62, I.63</td>
<td>Particulate Matter, Industrial Processes</td>
<td>E = 4.10 * P&lt;sup&gt;0.67&lt;/sup&gt; or E = 55 * P&lt;sup&gt;0.11&lt;/sup&gt; - 40</td>
<td>Method 5B/5F</td>
<td>Recordkeeping</td>
<td>Every 3-years</td>
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<tr>
<td>I.18, I.27, I.60, I.62, I.63</td>
<td>CO and VOCs from Regenerator</td>
<td>Combustion promoters (as needed) and Good combustion practices</td>
<td>Recordkeeping</td>
<td>On-going</td>
<td>Quarterly</td>
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<tr>
<td>I.20, I.48, I.57, I.58, I.62, I.63</td>
<td>FCC Charge Heater (FCC-Htr-1) - Opacity</td>
<td>20 %</td>
<td>Method 9</td>
<td>As required by the Department and Section III.A.1</td>
<td>Semiannually</td>
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<td>I.21, I.43, I.48, I.57, I.58, I.62, I.63</td>
<td>FCC Charge Heater (FCC-Htr-1)</td>
<td>ULNBs</td>
<td>Method 7</td>
<td>Every 3-years</td>
<td></td>
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<tr>
<td>I.22, I.23, I.27, I.29, I.38, I.43, I.44, I.47, I.48, I.49, I.52, I.57, I.58, I.59, I.60, I.61, I.62, I.63</td>
<td>NO&lt;sub&gt;x&lt;/sub&gt; from FCC Charge Heater (FCC-Htr-1)</td>
<td>40 ppm&lt;sub&gt;vol&lt;/sub&gt; at 0% O&lt;sub&gt;2&lt;/sub&gt;/30-day rolling average basis</td>
<td>NO&lt;sub&gt;x&lt;/sub&gt; CEMS Method 7</td>
<td>Every 3-years</td>
<td></td>
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</table>
Conditions

<table>
<thead>
<tr>
<th>Condition(s)</th>
<th>Pollutant/Parameter</th>
<th>Permit Limit</th>
<th>Compliance Demonstration Method</th>
<th>Frequency</th>
<th>Reporting Requirement</th>
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</thead>
<tbody>
<tr>
<td>I.24, I.43, I.48, I.57, I.58, I.62, I.63</td>
<td>CO from FCC Charge Heater (FCC-Htr-1)</td>
<td>100 ppmv at 3% O₂/24-hour rolling average basis</td>
<td>Method 10</td>
<td>Every 3-years</td>
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<tr>
<td>I.25, I.29, I.45, I.54, I.60, I.62, I.63</td>
<td>H₂S in Fuel Gas (FCC-Htr-1)</td>
<td>60 ppmv/365 day rolling average</td>
<td>40 CFR 60 Subpart Ja</td>
<td>40 CFR 60 Subpart Ja</td>
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<tr>
<td>I.26, I.46, I.56, I.62, I.63</td>
<td>CO, VOC, and PM/PM₁₀/PM₂.₅ emissions from the FCC Charge Heater (FCC-Htr-1)</td>
<td>Implement proper design and good combustion techniques</td>
<td>Recordkeeping</td>
<td>On-going</td>
<td></td>
</tr>
</tbody>
</table>

**Conditions**

I.1. CHS shall not cause or authorize emissions to be discharged from the FCCU Regenerator Stack into the outdoor atmosphere that exhibit an opacity of 30% except for one 6 minute average opacity reading in any one hour (ARM 17.8.340 and 40 CFR 60 Subpart J).

I.2. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart J-Standards of Performance for Petroleum Refineries. The FCC Regenerator is subject to the Subpart J requirements for SO₂ and PM (PM standard applicability of Subpart J was through consent decree, and incorporated as part of MAQP 1821-13) (40 CFR 60 Subpart J).

I.3. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart Ja-Standards of Performance for Petroleum Refineries. The FCC Regenerator is subject to the Subpart Ja requirements for CO (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

I.4. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart CC, NESHAPs From Petroleum Refineries, including compliance with specific requirements in Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart CC applies to the various pumps, valves, flanges, and other equipment in organic HAP service within the FCC Unit (ARM 17.8.342 and 40 CFR 63 Subpart CC).

I.5. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart UUU, NESHAPs for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units. The FCC Regenerator is subject to the Subpart UUU requirements for Metal HAP and Organic HAP emissions (ARM 17.8.342; 40 CFR 63 Subpart UUU).

I.6. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

I.7. CHS shall not cause or authorize total SO₂ emissions from the FCC regenerator stack to exceed the limit of 2,142.3 pounds per 3-hour period (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).
I.8. CHS shall not cause or authorize total SO₂ emissions from the FCC Regenerator stack to exceed the limit of 17,138.4 pounds per calendar day (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

I.9. CHS shall not cause or authorize total SO₂ emissions from the FCC Regenerator stack to exceed the limit of 6,255,516 pounds per calendar year (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

I.10. CHS shall not cause or authorize SO₂ emissions from the FCC Regenerator stack to exceed 50 ppm,vd at 0% O₂ per 7-day rolling average and 25 ppm,vd at 0% O₂ on a 365-day rolling average (ARM 17.8.752, ARM 17.8.340, and 40 CFR 60 Subpart J. Conditions originated in the consent decree and were incorporated as part of MAQP 1821-13).

I.11. CHS shall not cause or authorize CO emissions from the FCC Regenerator stack to exceed 500 ppm,vd at 0% excess air, on an hourly average basis (ARM 17.8.749 and 40 CFR 60 Subpart J; ARM 17.8.752).

I.12. CHS shall not cause or authorize CO emissions from the FCC Regenerator stack to exceed 100 ppm,vd at 0% O₂ per 365-day rolling average (ARM 17.8.749. Condition originated in the consent decree and was incorporated as part of MAQP 1821-15).

I.13. NOₓ emissions from the FCCU shall not exceed 65.1 ppm,vd at 0% O₂ on a 365-day rolling average basis. This long-term limit shall apply at all times (including during startup, shutdown, and malfunction) that the FCCU Regenerator Stack is operating (ARM 17.8.749 and ARM 17.8.752. Condition originated from consent decree and was incorporated as part of MAQP #1821-21).

I.14. NOₓ emissions from the FCCU shall not exceed 102 ppm,vd at 0% O₂ on a 7-day rolling average basis. This short-term limit shall exclude periods of startup, shutdown, and malfunction, but shall apply at all other times that the FCCU is operating. For days and hours in which the FCCU is not operating, no NOₓ value shall be used in the average, and those periods shall be skipped in determining compliance with the 7-day and 365-day averages (ARM 17.8.749 and ARM 17.8.752. Condition originated from consent decree and was incorporated as part of MAQP 1821-21 via ARM 17.8.752).

I.15. NOₓ emissions from the FCCU Regenerator Stack shall not exceed 117 tons per 12-month rolling average (limit is based on 65.1 ppm,vd at 0% O₂ on a 365-day rolling average) (ARM 17.8.749).

I.16. PM emissions from the FCCU shall be controlled with an ESP. CHS shall not cause or authorize total PM emissions from the FCC Unit stack to exceed 1.0 lb PM/1,000 lb of coke burned (ARM 17.8.752, ARM 17.8.340, and 40 CFR 60 Subpart J. Condition originated from consent decree and was incorporated as part of MAQP 1821-13).

I.17. Pursuant to ARM 17.8.310, unless otherwise specified by rule or in this permit, CHS shall not cause or authorize particulate matter to be discharged from the FCC Unit 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:

\[ E = 4.10 \times P^{0.67} \]

For process weight rates in excess of 30 tons per hour:

\[ E = 55.0 \times P^{0.11} - 40 \]

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

I.18. CO and VOC emissions from the FCCU Regenerator stack shall be controlled through the use of CO combustion promoters (as needed) and good combustion practices (ARM 17.8.752).

I.19. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart Ja – Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007. This shall apply to FCC Charge Heater (FCC-Htr-1), as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

I.20. CHS shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibits an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

I.21. The FCC Charge Heater (FCC-Htr-1) shall be equipped with ultra-low NOx burners (ULNBs) (ARM 17.8.752).

I.22. CHS shall not cause or authorize NOx emissions from the FCC Charge Heater (FCC-Htr-1) to exceed 40 ppmv (dry basis, corrected to 0% excess air) on a 30-day rolling average basis (ARM 17.8.752 and 40 CFR 60 Subpart Ja).

I.23. CHS shall not cause or authorize NOx emissions from the FCC Charge Heater (FCC-Htr-1) to exceed 2.6 lb/hr based on a 24-hour rolling average and 10.1 tpy based on a 12-calendar month total (ARM 17.8.752).

I.24. CHS shall not cause or authorize CO emissions from the FCC Charge Heater (FCC-Htr-1) to exceed 100 ppmv at 3% O2 on a 24-hour rolling average basis (ARM 17.8.752).

I.25. CHS shall not burn in the FCC Charge Heater (FCC-Htr-1) any fuel gas that contains H2S in excess of 60 ppmv, determined daily on a 365-successive calendar day rolling average basis (ARM 17.8.752, ARM 17.8.340, and 40 CFR 60 Subpart Ja).

I.26. CHS shall implement proper design and good combustion techniques to minimize CO, VOC, and PM/PM10/PM2.5 emissions from the FCC Charge Heater (FCC-Htr-1) (ARM 17.8.752).
Compliance Demonstration

I.27. CHS shall operate and maintain the following CEMS/CERMS on the FCC Regenerator stack:

a. SO₂ (ARM 17.8.749, 40 CFR 60 Subpart J, and Billings/Laurel SIP)

b. Stack gas flow (Billings/Laurel SO₂ SIP)

c. NOₓ (ARM 17.8.749)

d. CO (ARM 17.8.749 and 40 CFR 60 Subpart Ja)

e. O₂ (ARM 17.8.749, 40 CFR 60 Subpart J and Ja, and 40 CFR 63 Subpart UUU)


I.29. CHS shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60 Subpart Ja (ARM 17.8.340, ARM 17.8.749, and 40 CFR 60 Subparts A and Ja).

I.30. CHS shall demonstrate compliance with 40 CFR 63 Subpart DDDDDD as required by Subpart DDDDDD including maintaining on-site an annual report containing the information required in 40 CFR 63.7540 (ARM 17.8.342 and 40 CFR 63 Subpart DDDDDD).


I.32. Compliance with the SO₂ emission limitations contained in Section III.I.7, III.I.8, III.I.9, and III.I.10 shall be monitored using data from the CEMS required by Exhibit A, Section 6(B)(1) and (2) and in accordance with the appropriate equation(s) in Exhibit A, Section 2(A)(1), (7), (9), and (14), except when CEMS data is not available as provided in Exhibit A, Section 2(A)(14) of the Stipulation (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003, and ARM 17.8.1213). SO₂ and O₂ 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 Specifications 2 and 3 (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and ARM 17.8.749, ARM 17.8.1213, and 40 CFR 60 Subpart J). For the FCC Regenerator stack SO₂ CEMS, 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) (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003 and ARM 17.8.1213).

I.33. In order to certify the SO₂ emission rates in pounds per hour for the FCC Regenerator stack, CHS shall perform annual source testing using EPA-approved methods (40 CFR 60,
Appendix A, Methods 1-4, 6/6c as appropriate for the Stipulation and Exhibit A) 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).

NOx, CO, and O2 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, 3 & 4 (40 CFR 60.13 and ARM 17.8.749).

I.34. The annual Relative Accuracy Test Audits (RATAs) required by 40 CFR 60.13 and Exhibit A, Sections 6(C) and (D) of the Stipulation may substitute for the annual source tests provided that the flow rate RATA and the concentration RATA are performed simultaneously and additional calculations are made to determine and report the data in pounds per hour of SO2 (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003, 40 CFR 60.13).

I.35. In order to certify the NOx emission rates in tons per 12-month rolling average for the FCC Regenerator stack, CHS shall perform annual source testing using EPA-approved methods (40 CFR 60, Appendix A, Methods 1-4, and 7 as appropriate) 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).

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

I.36. All continuous stack gas flow rate monitors shall be installed, certified (on a flow rate basis), and operated in accordance with Department Method A-1 of Attachment #1 and be subject to and meet (on a flow rate basis) the quality assurance and quality control requirements of Department Method B-1 of Attachment #1 (ARM 17.8.1213 and Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

I.37. SO2 CEMS are to be in operation at all times when the emission units are operating, except for quality assurance and control checks, breakdowns and repairs. Startup and shut down for the FCC Regenerator stack shall only include time periods when gas-oil feedstock is being delivered to the FCC. In the event the primary CEMS is unable to meet minimum availability requirements, the recipient shall provide a back-up or alternative monitoring system and plan such that continuous compliance can be demonstrated (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003. SO2 CEM also required by 40 CFR 60 Subpart J).

I.38. All CEMS 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 CEMS is unable to meet minimum availability requirements, the recipient shall provide a back-up or alternative monitoring system and plan such that continuous compliance can be demonstrated (ARM 17.8.749).
I.39. CHS shall institute a monitoring and maintenance program in accordance with 40 CFR 60 Subpart VV, as required by 40 CFR 63 Subpart CC (ARM 17.8.342 and 40 CFR 63 Subpart CC).

I.40. CHS shall maintain records, under CHS’s control, of monitoring and maintenance activities on all applicable pumps, shutoff valves, relief valves and other piping and valves as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.340 and 40 CFR 63 Subpart CC).


I.42. CHS shall conduct PM tests on the FCC Regenerator stack every 3-years, or on another testing schedule as may be approved by the Department to monitor compliance with the limits in Sections III.I.16 and III.I.17. CHS shall follow the stack protocol specified in 40 CFR 60.106(b)(2) and Method 5B/5F (ARM 17.8.1212; ARM 17.8.340 and 40 CFR 60 Subpart J; and ARM 17.8.105).

I.43. The FCC Charge Heater (FCC-Htr-1) shall be tested for NOX and CO, concurrently, every 3-years. For NOX/O2 testing, this can be completed in conjunction with annual CEMS/CERMS RATA performance testing in accordance with Appendix F (40 CFR Part 60) requirements, or according to another testing/ monitoring schedule as may be approved by the Department. All results must be submitted to the Department in order to demonstrate compliance with the emission limits (ARM 17.8.105 and ARM 17.8.749).

I.44. Continued compliance with the NOX emission limits in Section III.I.22, and III.I.23 for the FCC Charge Heater (FCC-Htr-1) shall be monitored using the NOX/O2 CEMs and the volumetric stack flow rate monitor (with appropriate moisture correction) (ARM 17.8.1213).

I.45. Compliance monitoring for the H2S limit in Section III.I.25 shall be based upon continuous H2S concentration monitor data and fuel gas flowmeter data as required in Section III.B (ARM 17.8.1213).

I.46. Compliance with Section III.I.26 shall be monitored by maintaining records that proper design and good combustion techniques were implemented for the FCC Charge Heater (FCC-Htr-1).

I.47. CHS shall operate and maintain the following on the FCC Charge Heater (FCC-Htr-1

a. Stack gas flow (ARM 17.8.749)

b. NOX/O2 (ARM 17.8.749 and 40 CFR 60 Subpart Ja)

Recordkeeping

I.48. All compliance source test recordkeeping shall be performed in accordance with the test method used and the Montana Source Test Protocol and Procedures Manual, and shall be maintained on site (or under facility’s control) (ARM 17.8.106 and ARM 17.8.1212).
I.49. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart J and Subpart Ja (ARM 17.8.340 and 40 CFR 60 Subparts A, J and Ja).

I.50. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 63 Subpart UUU (ARM 17.8.342 and 40 CFR 63 Subpart A and UUU).

I.51. CHS shall maintain records as required by 40 CFR 63 Subpart DDDDD (ARM 17.8.342, 40 CFR 63 Subpart DDDDD, and ARM 17.8.1212).

I.52. CHS shall maintain a file of all measurements from the CEMS, COMS, and performance testing measurements, including: all CEMS and COMS performance evaluations; all CEMS and COMS or monitoring device calibration checks and audits; all adjustments and maintenance performed on these systems or devices. These shall be recorded in a permanent form suitable for inspection and shall be retained on-site for at least 5 years following the date of such measurements and reports (ARM 17.8.749 and ARM 17.8.1212).

I.53. CHS shall maintain records of operation including documentation of any maintenance and/or inspection activities performed on the ULNB (ARMB 17.8.1212).

I.54. CHS shall maintain records documenting all H2S concentration monitor data and fuel gas flowmeter data. The data must be maintained, on-site, and must be submitted to the Department upon request (ARM 17.8.1212).

I.55. CHS shall conduct recordkeeping in accordance with 40 CFR 63 Subpart CC, including recordkeeping for equipment leaks performed in accordance with 40 CFR 60.486 and 40 CFR 63.654 (ARM 17.8.342 and 40 CFR 63 Subpart CC).

I.56. CHS shall maintain onsite records required by Section III.I.46 (ARM 17.8.1212).

**Reporting**

I.57. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

I.58. CHS shall notify the Department in writing of each source test a minimum of 25 working days prior to the actual testing, unless otherwise specified by the Department (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

I.59. CHS shall notify the Department in writing of each RATA a minimum of 25 working days prior to the actual testing, unless otherwise specified by the Department (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

I.60. CHS shall submit quarterly emission reports to the Department based on data from the installed CEMS/CERMS/COMS or other monitoring/testing information. CHS shall submit the quarterly emission reports within 30 days of the end of each reporting period. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or uploaded to the State of Montana’s File Transfer Service.
using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service). The report shall include the following (ARM 17.8.749):

a. Source or unit operating time during the reporting period;

b. 7-day and 365-day rolling average SO₂ concentrations (ppm);

c. Daily and monthly NOₓ averages in ppm, corrected to 0% O₂;

d. Daily maximum 1-hour CO average (ppm), for each calendar day;

e. Monitoring downtime that occurred during the reporting period;

f. A summary of excess emissions/noncompliance or applicable concentrations for each pollutant and the averaging time identified in Section III.I.1, I.10, I.11, I.12, I.13, I.14, I.15, I.22, I.23, I.24, I.25;

g. Compliance monitoring for hourly, 24-hour, monthly and annual limits specifically allowed in Section III.I.1, I.10, I.11, I.12, I.13, I.14, I.15, I.22, I.23, I.24, I.25; and

h. Reasons for any emissions in excess of those specifically allowed in Section III.I.1, I.10, I.11, I.12, I.13, I.14, I.15, I.22, I.23, I.24, I.25 with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

I.61. In accordance with Section 7 of the Stipulation (Appendix E of this permit), CHS 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 Division office in Helena and to the Regional Office from which the Compliance Officer assigned to this facility is based. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003, ARM 17.8.1212).

I.62. 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.63. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. A summary of the records required by Section III.I.46, III.I.53, and III.I.54, during the reporting period;

c. A summary of the records required by Section III.I.46;
d. A summary of compliance with emission limits and reference to date of submittal of quarterly reports submitted as required by Section III.I.60;

e. A summary of compliance with Stipulation limits and reference to date of submittal of quarterly reports submitted as required by Section III.I.61;

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

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

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

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

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

J. **EU009 – Alkylation/Butamer/Merox/Saturate Units**

*Alkylation Unit Hot Oil Belt Heater (ALKY-HTR-1), Group 1 Miscellaneous Process Vents (Alkylation Unit Butamer Stabilizer Offgas and Disulfide Separator Off Gas)*

<table>
<thead>
<tr>
<th>Condition(s)</th>
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<th>Permit Limit</th>
<th>Compliance Method</th>
<th>Compliance Demonstration Frequency</th>
<th>Reporting Requirement</th>
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<tr>
<td>J.1, J.6, J.12, J.16, J.17</td>
<td>Opacity</td>
<td>20%</td>
<td>Method 9</td>
<td>As Required by the Department and Section III.A.1</td>
<td>Semiannually and Section III.A.2</td>
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<td>Condition(s)</td>
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<td>Permit Limit</td>
<td>Compliance Demonstration Method</td>
<td>Compliance Demonstration Frequency</td>
<td>Reporting Requirement</td>
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**Conditions**

**J.1.** CHS 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 (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one 4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

**J.2.** CHS shall comply with all applicable requirements of 40 CFR 60 Subpart GGG-Equipment Leaks of VOC in Petroleum Refineries, including compliance with specific requirements in Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart GGG applies to the various pumps, valves, flanges, and other equipment in VOC service within the Alkylation/Butamer/Merox/Saturate Units (ARM 17.8.340 and 40 CFR 60 Subpart GGG).

**J.3.** CHS shall comply with all applicable requirements of 40 CFR 63 Subpart CC, NESHAPs From Petroleum Refineries, including compliance with specific requirements in Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart CC applies to the various pumps, valves, flanges, and other equipment in organic Hazardous Air Pollutant (HAP) service within the Alkylation/Butamer/ Merox/Saturate Units (ARM 17.8.342 and 40 CFR 63 Subpart CC).

**J.4.** CHS shall comply with all applicable requirements of 40 CFR 63.643 as they apply to the units required to comply with the Group 1 Miscellaneous Process Vents Provisions (ARM 17.8.342 and 40 CFR 63 Subpart CC).

**J.5.** CHS shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

**Compliance Demonstration**

**J.6.** As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.J.1 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

**J.7.** CHS shall conduct all recordkeeping, monitoring and testing as required by 40 CFR 60 Subpart GGG and 40 CFR 63 Subpart CC. These regulations shall apply to the Alkylation...
Hot Oil Belt Heater and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart GGG; and ARM 17.8.342 and 40 CFR 63 Subpart CC).

J.8. Compliance monitoring for Group 1 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.10. CHS shall maintain records, under CHS’s control, of monitoring and maintenance activities on all applicable pumps, shutoff valves, relief valves and other piping and valves as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.340 and 40 CFR 60 Subpart GGG; and ARM 17.8.342 and 40 CFR 63 Subpart CC).


Recordkeeping

J.12. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

J.13. CHS shall conduct recordkeeping in accordance with 40 CFR 60 Subpart GGG; and 40 CFR 63 Subpart CC, including recordkeeping for equipment leaks performed in accordance with 40 CFR 60.486 and 40 CFR 63.654 (ARM 17.8.340 and 40 CFR 60 Subpart GGG; and 40 CFR 63 Subpart CC).

J.14. Recordkeeping for Group 1 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.15. CHS shall maintain records as required by 40 CFR 63 Subpart DDDDD (ARM 17.8.342, 40 CFR 63 Subpart DDDDD, and ARM 17.8.1212).

Reporting

J.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).

J.17. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;
b. Summary of compliance with the reporting requirements of 40 CFR 63 Subpart CC during the reporting period. This reporting requirement does not require the permittee to submit any report or compliance status determination earlier than is required by 40 CFR 63 Subpart CC;

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

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

K. EU010 –Mild Hydrocracker and 100 Unit Hydrogen Plant

Reformer heater (H-101), Reformer heater (H-102), Reactor charge heater (H-201), Fractionator feed heater (H-202), Recycle Hydrogen Compressor (C-203), Makeup Hydrogen Compressors (C-204 A/B)

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<th>Condition(s)</th>
<th>Pollutant/Parameter</th>
<th>Permit Limit</th>
<th>Compliance Demonstration Method</th>
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<td>Makeup Hydrogen Compressors (C-204 A/B, Recycle Hydrogen Compressor (C-203)</td>
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<td>40 CFR 60 Subpart GGG as applicable to compressors in hydrogen service</td>
<td>40 CFR 60 Subpart GGG as applicable to compressors in hydrogen service</td>
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<td>SO$_2$ from H-202</td>
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<td>RFG System H$_2$S CEMS, see Section B</td>
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<td>K.8, K.35, K.38, K.47, K.59, K.62, K.64, K.65</td>
<td>NO$_x$ from H-202</td>
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<td>Method 7</td>
<td>Every Three Years</td>
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<td>K.9, K.35, K.38, K.47, K.59, K.62, K.64, K.65</td>
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<td>Emission Calculations</td>
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<td>8.92 Tons per Rolling 12 Calendar-Month Total and 2.23 lb/hr</td>
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<td>K.15, K.39, K.62, K.64, K.65</td>
<td>VOC from H-201</td>
<td>0.91 Tons per Rolling 12 Calendar-Month Total</td>
<td>Emission Calculations</td>
<td>Ongoing</td>
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<td>Condition(s)</td>
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<td>K.17, K.38, K.62, K.64, K.65</td>
<td>SO$_2$ from H-101</td>
<td>1.68 tons per rolling 12-calendar month total and 2.15 lb/hr</td>
<td>Fuel flow and calculations</td>
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<td>CO from H-101</td>
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<td>0.35 tons per rolling 12 calendar month total</td>
<td>Emission Calculations</td>
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<td>40 CFR 60 Subpart Ja</td>
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<td>Fire all available 100 Unit PSA tailgas</td>
<td>Firing all available 100 Unit PSA tailgas in the 100 Unit Hydrogen Plant reformer heaters except during startup, shutdown or process upset</td>
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<td>K.25, K.44, K.45, K.47, K.59, K.62, K.64, K.65</td>
<td>NOx from H-102</td>
<td>40 ppmv (dry basis, corrected to 0 percent excess air) on a 30-day rolling average basis, 3.02 lb/hr on a rolling 24-hr basis, and 11.3 tons/rolling 12-calendar month total</td>
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<td>K.26, K.45, K.47, K.59, K.62, K.64, K.65</td>
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<td>5.7 lb/hr and 25.1 tons/rolling 12-months</td>
<td>Method 10</td>
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<td>Fitted with ULNBs</td>
<td>Method 7</td>
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<td>K.28, K.46, K.58, K.64, K.65</td>
<td>CO, VOC, and PM/PM&lt;sub&gt;10&lt;/sub&gt;/PM&lt;sub&gt;2.5&lt;/sub&gt; emissions from H-102</td>
<td>Implement proper design and good combustion techniques</td>
<td>Implement proper design and good combustion techniques</td>
<td>Ongoing</td>
<td>Semiannually</td>
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Conditions

K.1. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart GGG-Equipment Leaks of VOC in Petroleum Refineries, including compliance with specific requirements in Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart GGG applies to the various pumps, valves, flanges, and other equipment in VOC service within the 100 Unit Hydrogen Plant (ARM 17.8.340 and 40 CFR 60 Subpart GGG).

K.2. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart GGGa – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or ModificationCommenced After November 7, 2006. This requirement applies to the Mild Hydrocracker. The C-203 recyle hydrogen compressor and C-204 A/B makeup hydrogen compressors are subject to Subpart GGGa as compressors in hydrogen service (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).

K.3. CHS shall comply with all requirements of 40 CFR 63 Subpart CC - NESHAP from Petroleum Refineries as applicable to the Mild Hydrocracker and 100 Unit Hydrogen Plant (ARM 17.8.342, 17.8.1212 and 40 CFR 63 Subpart CC).

K.4. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart QQQ-Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).
K.5. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

K.6. CHS 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. This applies to the sources in the MHC complex (ARM 17.8.304 (2)).

K.7. SO$_2$ emissions from H-202 shall not exceed 3.14 tons per rolling 12-calendar month total, and 1.43 lb/hr (ARM 17.8.749).

K.8. NO$_x$ emissions from H-202 shall not exceed 8.34 tons per rolling 12-calendar month total and 2.09 lb/hr (ARM 17.8.749).

K.9. CO emissions from H-202 shall not exceed 6.43 tons per rolling 12-calendar month total and 1.61 lb/hr (ARM 17.8.749).

K.10. VOC emissions from H-202 shall not exceed 0.65 tons per rolling 12-calendar month total (ARM 17.8.749).


K.12. SO$_2$ emissions from H-201 shall not exceed 4.35 tons per rolling 12-calendar month total and 1.99 lb/hr (ARM 17.8.749).

K.13. NO$_x$ emissions from H-201 shall not exceed 11.56 tons per rolling 12-calendar month total and 2.9 lb/hr (ARM 17.8.749).

K.14. CO emissions from H-201 shall not exceed 8.92 tons per rolling 12-calendar month total and 2.23 lb/hr (ARM 17.8.749).

K.15. VOC Emissions from H-201 shall not exceed 0.91 tons per rolling 12-calendar month total (ARM 17.8.749).


K.17. SO$_2$ emissions from H-101 shall not exceed 1.68 tons per rolling 12-calendar month total and 2.15 lb/hr (ARM 17.8.749).

K.18. NO$_x$ emissions from H-101 shall not exceed 27.16 tons per rolling 12-calendar month total and 6.78 lb/hr (ARM 17.8.749).

K.19. CO emissions from H-101 shall not exceed 13.93 tons per rolling 12-calendar month total and 4.51 lb/hr (ARM 17.8.749).
K.20. VOC emissions from H-101 shall not exceed 0.35 tons per rolling 12-calendar month total (ARM 17.8.749).


K.22. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart Ja – Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007. This regulation shall apply to the H-102 Reformer Heater, as appropriate (ARM 17.8.340; 40 CFR 60 Subpart Ja).

K.23. All available 100 Unit PSA tailgas shall be fired in the 100 Unit Hydrogen Plant reformer heaters, except during periods of startup, shutdown or process upset (ARM 17.8.752).


K.25. NOX emissions from H-102 shall not exceed 40 ppmv (dry basis, corrected to 0 percent excess air) on a 30-day rolling average basis (40 CFR 60 Subpart Ja), 3.02 lb/hr on a rolling 24-hr basis (ARM 17.8.752), and 11.3 tons/rolling 12-calendar month total (ARM 17.8.749).

K.26. CO emissions from H-102 shall not exceed 5.7 lb/hr (ARM 17.8.752) and 25.1 tons/rolling 12-calendar month total (ARM 17.8.749).

K.27. H-102 shall be fitted with ULNBs (ARM 17.8.752).

K.28. CHS shall implement proper design and good combustion techniques to minimize CO, VOC, and PM/PM10/PM2.5 emissions from the H-102 Reformer Heater (ARM 17.8.752).

Compliance Demonstration

K.29. CHS shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart GGG, Equipment Leaks of VOC in Petroleum Refineries. These regulations shall apply to the 100 Unit Hydrogen Plant, as appropriate. A monitoring and maintenance program, as described under New Source Performance Standards (40 CFR 60 Subpart VV), shall be instituted (ARM 17.8.340 and 40 CFR 60 Subpart GGG).

K.30. CHS shall demonstrate compliance with 40 CFR 63 Subpart CC as specified in the rule (40 CFR 63 Subpart CC and ARM 17.8.1212).

K.31. CHS shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart GGGa - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006. These regulations shall apply to the Mild Hydrocracker unit once constructed (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).

K.32. CHS shall meet the requirements of all 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. These regulations shall apply to the HDS unit and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

K.33. CHS shall demonstrate compliance with 40 CFR 63 Subpart DDDDDD as required by Subpart DDDDDD including maintaining on-site an annual report containing the information required in 40 CFR 63.7540 (ARM 17.8.342 and 40 CFR 63 Subpart DDDDDD).

K.34. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.K.6 shall be monitored using EPA Reference Method 9 testing by a qualified observer (ARM 17.8.1213).

K.35. The Fractionator Feed Heater Stack (H-202) shall be tested every three years, or according to another testing/monitoring schedule as may be approved by the Department, for NOx and CO, concurrently (using Methods 7 and 10, respectively), and the results submitted to the Department in order to monitor compliance with the NOx and CO emission limits contained in Section III.K.8 and III.K.9 (ARM 17.8.105 and ARM 17.8.749).

K.36. The Reactor Charge Heater Stack (H-201) shall be tested every three years, or according to another testing/monitoring schedule as may be approved by the Department, for NOx and CO, concurrently (using Methods 7 and 10, respectively), and the results submitted to the Department in order to demonstrate compliance with the NOx and CO emission limits contained in Section III.K.13 and III.K.14 (ARM 17.8.105 and ARM 17.8.749).

K.37. The Reformer Heater Stack (H-101) shall be tested every three years, or according to another testing/monitoring schedule as may be approved by the Department, for NOx and CO, concurrently (using Methods 7 and 10, respectively), and the results submitted to the Department in order to demonstrate compliance with the emission limits contained in Section III.K.18 and III.K.19 (ARM 17.8.105 and ARM 17.8.749).

K.38. In addition to the testing required in Section III.K.35, III.K.36, and III.K.37, compliance monitoring for the emission limits applicable to the MHC complex sources listed in Sections III.K.8, K.9, K.13, K.14, K.18, and K.19 be based upon actual fuel-burning rates and the emission factors developed from the most recent compliance source test. Fuel flow rates, fuel heating value, production information and other data, as needed, shall be recorded for each emitting unit during the performance of the source tests in order to develop emission factors for use in the compliance determinations. New emission factors shall become effective within 60 days after the completion of a source test accepted by the Department. In addition, CHS shall monitor compliance with the SO2 limits for the MHC complex sources through monitoring the volume and H2S concentration of refinery fuel gas combusted, as specified in Section III.B. Alternatively, firing these units solely on natural gas shall demonstrate compliance with the applicable SO2 limits during the timeframe the units are fired on natural gas (ARM 17.8.1213).

K.39. CHS shall monitor compliance with the VOC limits for the Fractionator Feed Heater (H-202), Reactor Charge Heater (H-201), and Reformer Heater (H-101) listed in Section III.K.10, III.K.15, and III.K.20 through maintaining records of the fuel gas consumed and using an appropriate emissions factor as approved by the Department (ARM 17.8.1213).

K.41. CHS shall demonstrate compliance in accordance with 40 CFR 60 Subpart Ja, to monitor compliance with Section III.K.22 (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

K.42. Compliance with Section III.K.23 shall be monitored by firing all available 100 Unit PSA tailgas in the 100 Unit Hydrogen Plant reformer heaters, except during periods of startup, shutdown or process upset (ARM 17.8.1213).

K.43. Compliance monitoring for the H₂S limit in Section III.K.24 shall be based upon continuous H₂S concentration monitor data and fuel gas flowmeter data as required in Section III.B (ARM 17.8.1213).

K.44. For the H-102 Reformer heater demonstration of NOₓ emissions limits, CHS shall install and operate a NOₓ/O₂ CEMS (40 CFR 60 Subpart Ja), and volumetric flow rate monitor (ARM 17.8.749 and ARM 17.8.1213). The NOₓ/O₂ CEMS shall comply with Appendix B of 40 CFR 60, Performance Specifications 2, 3, and 6; and Appendix F of 40 CFR 60. The required volumetric flow rate monitor shall comply with the Billings/Laurel SIP Pollution Control Plan Exhibit A, Attachment 1 Methods A-1 and B-1 (ARM 17.8.749 and ARM 17.8.1213).

K.45. The H-102 Reformer Heater shall be tested once every three years, in conjunction with the annual CEMS/CERMS RATA performance testing in accordance with 40 CFR 60 Appendix F requirements, or according to another testing/monitoring schedule as may be approved by the Department, for NOₓ and CO, concurrently (using Methods 7 and 10, respectively, in accordance with Section III.A.2 (ARM 17.8.106)), and the results submitted to the Department in order to monitor compliance with the NOₓ and CO emission limits contained in Section III.K.25 and III.K.26.

K.46. Compliance with Section III.K.27 and III.K.28 shall be monitored by implementing proper design and good combustion techniques to minimize NOₓ, CO, VOC, and PM/PM₁₀/PM₂.₅ emissions from the H-102 Reformer Heater (ARM 17.8.1213).

Recordkeeping

K.47. CHS shall perform all source test recordkeeping in accordance with the appropriate test method and Section III.A.2 (ARM 17.8.106).

K.48. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart GGG (ARM 17.8.340 and 40 CFR 60 Subpart GGG).

K.49. CHS shall conduct recordkeeping for monitoring, testing, and documenting compliance in accordance with 40 CFR 60 Subpart GGGa (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).

K.50. CHS shall comply with the recordkeeping requirements of 40 CFR 63 Subpart CC (40 CFR 63 Subpart CC and ARM 17.8.1212).
K.51. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart QQQ (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

K.52. CHS shall maintain records as required by 40 CFR 63 Subpart DDDDD (ARM 17.8.342, 40 CFR 63 Subpart DDDDD, and ARM 17.8.1212).


K.54. CHS shall conduct recordkeeping for monitoring, testing, and documenting compliance in accordance with 40 CFR 60 Subpart Ja (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

K.55. CHS shall maintain records that all available 100 Unit PSA tailgas was fired in the 100 Unit Hydrogen Plant reformer heaters and CHS must document alternate fuel used during periods of startup, shutdown or process upset to maintain compliance with Section III.K.42 (ARM 17.8.1212).

K.56. CHS shall maintain records documenting all H2S concentration monitor data and fuel gas flowmeter data. The data must be maintained on-site, and must be submitted to the Department upon request (ARM 17.8.1212).

K.57. CHS shall maintain records of operation including documentation of any maintenance and/or inspection activities performed on the ULNB (ARM 17.8.1212).

K.58. CHS shall maintain records that proper design and good combustion techniques were implemented for the H-102 Reformer Heater to document compliance with Section III.K.46 (ARM 17.8.1212).

**Reporting**

K.59. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

K.60. CHS shall provide the Department copies of testing results, monitoring operations, recordkeeping, and report results as specified under 40 CFR 60 Subpart QQQ, Sections 60.693-2, 60.696, 60.697, and 60.698 (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

K.61. CHS shall comply with the reporting requirements contained in 40 CFR 63, Subpart CC and 40 CFR 63 DDDDD (ARM 17.8.342, CFR 63 Subpart CC and 40 CFR 63 Subpart DDDDD).

K.62. CHS shall submit quarterly emission reports to the Department based on data from the installed CEMS/CERMS. Emission reporting for SO2 from the emission rate monitor shall consist of a daily 24-hour average (ppm SO2, corrected to 0% O2) and a 24-hour total (lb/day) for each calendar day. CHS shall submit the monthly emission reports within 30 days of the end of each calendar quarter. CHS shall submit the quarterly emission reports within 30 days of the end of each reporting period. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or up-loaded
to the State of Montana’s File Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service). The quarterly report shall also include the following (ARM 17.8.749):

a. Source or unit operating time during the reporting period;

b. Quarterly fuel gas consumption rates;

c. Monitoring downtime that occurred during the reporting period;

d. A summary of excess emissions or applicable concentrations for each pollutant and the averaging period identified in Section III.K.7 through K.10, K.12-K.15, K.17-K.20, and K.24-K.26;

e. Compliance determinations for hourly, 24-hour and annual limits specifically allowed in Section III.K.7 through K.10, K.12-K.15, K.17-K.20, and K.24-K.26; and


K.63. In accordance with Section 7 of the Stipulation (Appendix F of this permit) CHS 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 Division office in Helena and to the Regional Office from which the Compliance Officer assigned to this facility is based. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

K.64. 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.65. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

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

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

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


g. Summary of compliance with 40 CFR 60 Subpart Ja during the reporting period;

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

i. Summary of compliance with unit emission limits and conditions of this section and the dates that quarterly reports were submitted as required by Section III.K.62.

j. Summary of compliance with Stipulation limits and dates that quarterly reports were submitted as required by Section III.K.63.

**L. EU011 – Zone D Sulfur Recovery Unit (SRU) Zone D SRU Incinerator Stack (INC-401)**

<table>
<thead>
<tr>
<th>Condition(s)</th>
<th>Pollutant/ Parameter</th>
<th>Permit Limit</th>
<th>Compliance Demonstration Method</th>
<th>Frequency</th>
<th>Reporting Requirements</th>
</tr>
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<tbody>
<tr>
<td>L.1, L.14, L.37, L.38</td>
<td>Zone D SRU</td>
<td>40 CFR 60 Subparts Ja</td>
<td>40 CFR 60 Subpart Ja</td>
<td>Semiannually and 40 CFR 60 Subpart Ja</td>
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<td>L.3, L.16, L.28, L.32, L.33, L.37, L.38</td>
<td>Opacity</td>
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<td>Method 9</td>
<td>As Required by the Department and Section III.A.1 Semiannually and Section III.A.2</td>
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<td>L.4, L.17, L.19, L.20,</td>
<td>SO₂</td>
<td>53.17 Tons per Rolling 12-Month Total,</td>
<td>CEMS</td>
<td>On-going</td>
<td>Quarterly</td>
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<td>Condition(s)</td>
<td>Pollutant/ Parameter</td>
<td>Permit Limit</td>
<td>Compliance Demonstration Method</td>
<td>Frequency</td>
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<td>L.22, L.23, L.26, L.28, L.32, L.33, L.35, L.37, L.38</td>
<td>and 14.21 lb/hr</td>
<td>Method 6/6c</td>
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<td>L.5, L.6, L.17, L.19, L.20, L.22, L.23, L.29, L.35, L.37, L.38</td>
<td>SO₂</td>
<td>250 ppm&lt;sub&gt;vd&lt;/sub&gt;, on a Rolling 12-hour average corrected to 0% oxygen</td>
<td>Subparts Ja</td>
<td>Subparts Ja</td>
<td>Semiannually and 40 CFR 60 Subpart Ja</td>
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<td>L.9, L.18, L.31, L.37, L.38</td>
<td>Zone D SRU Incinerator (INC-401)</td>
<td>Fuel Oil Cannot Be Fired in This Unit</td>
<td>Certify</td>
<td>Ongoing</td>
<td>Semiannually</td>
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<td>L.13, L.17, L.25, L.28, L.32, L.33, L.35, L.37, L.38</td>
<td>NO₄</td>
<td>3.5 Tons per Rolling 12 Calendar-Month Total, 19.2 lb/day, and 0.8 lb/hr</td>
<td>Method 7</td>
<td>Every Six Years</td>
<td>Semiannually and Section III.A.2</td>
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### Conditions

**L.1.** CHS shall comply with all applicable requirements of 40 CFR 60 Subpart Ja - Standards of Performance for Petroleum Refineries. These regulations shall apply to the Zone D SRU Incinerator Stack (INC-401) and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

**L.2.** CHS shall comply with all applicable requirements of 40 CFR 63 Subpart UUU – NESHAPs for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units. These regulations shall apply to the Zone D SRU Incinerator Stack (INC-401) and any other equipment, as appropriate (ARM 17.8.342 and 40 CFR 63 Subpart UUU).

**L.3.** CHS 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 (ARM 17.8.304(2)).

**L.4.** SO₂ emissions from the Zone D Incinerator Stack (INC-401) shall not exceed 53.17 tons per rolling 12-month total and 14.21 lb/hr, applicable at all times except during a malfunction, (ARM 17.8.749).

**L.5.** SO₂ emissions from the Zone D Incinerator Stack (INC-401) shall not exceed 250 ppmvol, rolling 12-hour average basis corrected to 0% O₂, applicable at all times except during startup, shutdown and malfunction (ARM 17.8.749, ARM 17.8.752, and 40 CFR 60 Subpart Ja).

**L.6.** CHS shall operate and maintain the TGTU on the Zone D SRU to control SO₂ emissions from the Zone D SRU incinerator stack (ARM 17.8.749).

**L.7.** CHS shall minimize the frequency and duration of startups and shutdowns of the Zone D SRP by operating at all times in accordance with an operation, maintenance and monitoring plan meeting the requirements of 40 CFR 63.1574(f) (ARM 17.8.752).

**L.8.** CHS shall comply with 40 CFR 63 subpart UUU (Refinery MACT II) emission limits during periods of startup and shutdown as specified in § 63.1568(a)(4). For the purposes of startup and shutdown, startup process begins when the Zone D SRU Combustion Air Blower is started up and ends when the use of purge gas (steam, nitrogen or natural gas) is terminated. Shutdown process begins when purge gas is initiated and ends when the Zone D SRU Combustion Air Blower is shut down. CHS shall document these events to define periods of startup and shutdown for the purpose of compliance demonstration (ARM 17.8.752 and 40 CFR 63 Subpart UUU).
L.9. CHS shall not fire fuel oil in this unit (INC-401) (ARM 17.8.749).

L.10. CHS shall not cause or authorize total SO$_2$ emissions from the Zone D SRU Incinerator stack to exceed the limit of 42.6 pounds per 3-hour period (Billings/Laurel SO$_2$ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.11. CHS shall not cause or authorize total SO$_2$ emissions from the Zone D SRU Incinerator stack to exceed the limit of 340.8 pounds per calendar day (Billings/Laurel SO$_2$ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.12. CHS shall not cause or authorize total SO$_2$ emissions from the Zone D SRU Incinerator stack to exceed the limit of 124,392 pounds per calendar year (Billings/Laurel SO$_2$ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.13. NO$_x$ emissions from the Zone D Incinerator Stack (INC-401) shall not exceed 3.5 tons per rolling 12-calendar month total, 19.2 lb/day, and 0.8 lb/hr (ARM 17.8.749).

**Compliance Demonstration**

L.14. CHS shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart Ja, Standards of Performance for Petroleum Refineries. These regulations shall apply to the Zone D SRU and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

L.15. CHS shall conduct all monitoring and testing as required by 40 CFR 63 Subpart UUU, including maintaining records to document conformance with procedures in CHS’s required operation, maintenance and monitoring plan (ARM 17.8.742 and 40 CFR 63 Subpart UUU).

L.16. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.L.3 shall be monitored using EPA Reference Method 9 testing by a qualified observer (ARM 17.8.1213).

L.17. The Zone D SRU Incinerator Stack (INC-401) shall be tested once every three years or according to another testing/monitoring schedule as may be approved by the Department, for SO$_2$ and shall be tested once every six years for NO$_x$ (using Methods 6/6c and 7, respectively), and the results submitted to the Department in order to monitor compliance with the SO$_2$ and NO$_x$ emission limits contained in Section III.L.4, L.10 - L.13 (ARM 17.8.105 and ARM 17.8.749).

L.18. Compliance with Section III.L.9 shall be monitored by not firing fuel oil in INC-401 (ARM 17.8.1213).

L.19. CHS shall operate and maintain CEMS/CERMS on the Zone D Incinerator Stack (INC-401) for SO$_3$, O$_2$, and volumetric flow rate (ARM 17.8.749, ARM 17.8.340, and 40 CFR 60 Subparts Ja, and Billings/Laurel SO$_2$ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003). Note: SIP is the reference that requires the volumetric flow rate.
L.20. Compliance monitoring for ppm, hourly, 24-hour and annual SO2 limits for the Zone D SRU Incinerator stack shall be based upon CEMS data utilized for SO2 as required in Section III.L.19 (ARM 17.8.1213).

L.21. Compliance with the SO2 emission limitations contained in Section III.L.10, III.L.11, and III.L.12 shall be monitored using data from the CEMS required by Exhibit A, Section 6(B)(1) and (2) and in accordance with the appropriate equation(s) in Exhibit A, Section 2(A)(1), (7), (9), and (14) except when CEMS data is not available as provided in Exhibit A, Section 2(A)(14) of the Stipulation (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.22. CEMS and CERMS required by this permit shall comply with all applicable provisions of 40 CFR 60.5 through 60.13, Subparts Ja, and Appendix B, Performance Specifications 2, 3, 6, and Appendix F (quality assurance/quality control procedures); and 40 CFR 52, Appendix E, for certifying Volumetric Flow Rate Monitors (ARM 17.8.749, Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003; 17.8.340 and 40 CFR 60 Subpart Ja).

L.23. 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. Startup and shut down for the Zone D SRU Stack shall only include time periods when sulfur-bearing gases are being delivered to the Zone D SRU. In the event the primary CEM system is unable to meet minimum availability requirements, the recipient shall provide a back-up or alternative monitoring system and plan such that continuous compliance can be demonstrated (ARM 17.8.749).

L.24. For the Zone D SRU stack CEMS, 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) (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.25. In addition to the testing required in Section III.L.17, compliance monitoring for the NOx emission limits applicable to the Zone D SRU shall be based upon actual fuel-burning rates and the emission factors developed from the most recent compliance source test. Fuel flow rates, fuel heating value, production information and other data, as needed, shall be recorded for each emitting unit during the performance of the source tests in order to develop emission factors for use in the compliance determinations. New emission factors shall become effective within 60 days after the completion of a source test (ARM 17.8.749).

L.26. In order to certify the SO2 emission rates in pounds per hour for the Zone D SRU stack, CHS shall perform annual source testing using EPA-approved methods (40 CFR 60, Appendix A, Methods 1-4 and 6/6c as appropriate for this Stipulation and Exhibit A) 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). The annual RATAs required by Sections 6(C) and (D) may substitute for the annual source tests provided that the flow rate RATA and the concentration RATA are performed simultaneously and additional calculations are made to determine and report the data in pounds per hour of sulfur dioxide (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).
L.27. All continuous stack gas flow rate monitors required by the Stipulation shall be installed, certified (on a flow-rate basis), and operated in accordance with Department Method A-1 of Attachment #1 and be subject to and meet (on a flow-rate basis) the quality assurance and quality control requirements of Department Method B-1 of Attachment #1 (Billings/Laurel SO$_2$ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

**Recordkeeping**

L.28. CHS shall perform all source test recordkeeping in accordance with the appropriate test method and Section III.A.2 (ARM 17.8.106).

L.29. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart Ja, including for the Zone D SRU and other associated equipment (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

L.30. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 63 Subpart UUU (ARM 17.8.342 and 40 CFR 63 Subpart UUU).

L.31. CHS shall maintain records that fuel oil was not fired in INC-401 as described in Section III.L.18 (ARM 17.8.1213).

**Reporting**

L.32. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

L.33. CHS shall notify the Department in writing of each source test a minimum of 25 working days prior to the actual testing, unless otherwise specified by the Department (Billings/Laurel SO$_2$ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.34. CHS shall notify the Department in writing of each RATA a minimum of 25 working days prior to the actual testing, unless otherwise specified by the Department (Billings/Laurel SO$_2$ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.35. CHS shall submit quarterly emission reports to the Department within 30 days of the end of each calendar quarter. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or up-loaded to the State of Montana’s File Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service). The quarterly report shall include the following (ARM 17.8.749):

a. Emission reporting for sulfur dioxide from the emission rate monitor shall consist of a daily 24-hour average (ppm SO$_2$, corrected to 0% O$_2$) and a 24-hour total (lb/day) for each calendar day;

b. Source or unit operating time during the reporting period;
c. Quarterly fuel gas consumption rates;

d. Monitoring downtime that occurred during the reporting period;

e. A summary of excess emissions or applicable concentrations for each pollutant and the averaging period identified in Section III.L.4-L.6 and L.13;

f. Compliance determinations for hourly, 24-hour and annual limits specifically allowed in Section III.L.4-L.6 and L.13; and

g. Reasons for any emissions in excess of those specifically allowed in Section III.L.4-L.6 and L.13 with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

L.36. In accordance with Section 7 of the Stipulation (Appendix F of this permit), CHS 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 Division office in Helena and the Regional Office from which the Compliance Officer assigned to this facility is based. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.37. 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.38. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. A summary of the records required by Section III.L.31;

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

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

e. A summary of compliance with unit emission limits and conditions of this section and dates that quarterly reports were submitted as required by Section III.L.35; and

f. A summary of compliance with Stipulation limits and dates that quarterly reports were submitted as required by Section III.L.36.
M. EU012 – Zone A Sulfur Recovery Unit (SRU)

Zone A SRU, Tail Gas Treatment Unit (TGTU), Tail Gas Incinerator (TGI) [SRU-AUX-4]

<table>
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<tr>
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<th>Permit Limit</th>
<th>Compliance Demonstration Method</th>
<th>Frequency</th>
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<td>40 CFR 60 Subpart J</td>
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<td>M.8, M.18, M.19, M.21, M.23, M.24, M.28, M.34, M.35, M.36, M.38, M.40, M.41</td>
<td>SO₂</td>
<td>11.6 lb/hour; 278.4 lb/day; and 40.66 tons/rolling 12-month</td>
<td>Method 6/6c</td>
<td>Every Three Years</td>
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<td>M.9, M.18, M.19, M.23, M.24, M.28, M.34, M.35, M.36, M.38, M.40, M.41</td>
<td>SO₂</td>
<td>200 ppm at 0% O₂ on a dry basis, per rolling 12-month average</td>
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<td>Every Three Years</td>
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<td>M.10, M.24, M.28, M.34, M.35, M.36, M.38, M.40, M.41</td>
<td>NOₓ</td>
<td>1.09 lb/hour; and 4.8 tons/rolling 12-month total</td>
<td>Method 7</td>
<td>Every Six Years</td>
<td>Semiannually and Section III.A.2</td>
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<td>PM</td>
<td>E = 4.10 * P^0.67 or E = 55 * P^0.11 - 40</td>
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<td>M.12, M.26, M.32, M.40, M.41</td>
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<td>Height no less than 132 feet</td>
<td>Recordkeeping</td>
<td>Annually</td>
<td>Semiannually</td>
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<tr>
<td>M.13, M.27, M.33, M.36, M.40, M.41</td>
<td>Fuel Oil</td>
<td>Fuel oil shall not be fired in this unit</td>
<td>Recordkeeping</td>
<td>Annually</td>
<td></td>
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</table>

**Conditions**

M.1. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart J – Standards of Performance for Petroleum Refineries. This regulation shall apply to the Zone A SRU TGTU TGI stack (SRU-AUX-4) and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart J). Sulfur pit emissions from the Zone A SRP shall be eliminated, controlled, or included and monitored as part of the Zone A tail gas emissions that meet the NSPS Subpart J limit of 250 ppmvd SO₂ corrected to 0% O₂, on a 12-hour rolling average basis, as required by 40 CFR 60.104(a)(2) (MAQP #1821-11, originally from CHS Consent Decree).
M.2. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart QQQ – Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems. This regulation shall apply to the TGTU process drains and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

M.3. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart UUU – NESHAPs for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units. These regulations shall apply to the Zone A SRU and any other equipment, as appropriate (ARM 17.8.342 and 40 CFR 63 Subpart UUU).

M.4. CHS 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. This applies to the sources in the TGTU (ARM 17.8.304 (2)).

M.5. CHS shall not cause or authorize total SO₂ emissions from the Zone A SRU TGI stack (SRU-AUX-4) exceed the limit of 2,916.3 pounds per 3-hour period (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

M.6. CHS shall not cause or authorize total SO₂ emissions from the Zone A SRU TGI stack (SRU-AUX-4) exceed the limit of 23,330.4 pounds per calendar day (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

M.7. CHS shall not cause or authorize total SO₂ emissions from the Zone A SRU TGI stack (SRU-AUX-4) to exceed the limit of 8,515,596 pounds per calendar year (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

M.8. CHS shall not cause or authorize total SO₂ emissions from the Zone A SRU TGI stack (SRU-AUX-4) to exceed the limits of 11.6 lb/hour; 278.40 lb/day; or 40.66 tons/rolling 12-month total (ARM 17.8.749).

M.9. CHS shall operate and maintain the TGTU on the Zone A SRU to limit SO₂ emissions from the Zone A SRU-AUX4 stack to no more than 200 ppm corrected to 0% O₂on a dry basis, per rolling 12-month average (ARM 17.8.749).

M.10. CHS shall not cause or authorize total NOₓ emissions from the Zone A SRU TGI stack (SRU-AUX-4) to exceed the limits of 1.09 lb/hour; or 4.8 tons/rolling 12-month total (ARM 17.8.749).

M.11. The particulate emission rate shall not exceed that specified by rule. Process weight shall include all sour gas streams into the absorber section of the plant. Combustion air and liquid gaseous fuels to heaters or tail gas incineration will not be included (ARM 17.8.749).

M.12. CHS shall maintain the Zone A TGI stack (SRU-AUX-4) stack at a height no less than 132 feet (ARM 17.8.749).

M.13. CHS shall not fire fuel oil in this unit (SRU-AUX-4) (ARM 17.8.749).
Compliance Demonstration

M.14. CHS shall demonstrate compliance with Section III.M.1 through the monitoring, recordkeeping, and reporting requirements of 40 CFR 60 Subpart J (ARM 17.8.1212).

M.15. CHS shall meet the requirements of all 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. These regulations shall apply to the Zone A TGTU process drains and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

M.16. CHS shall conduct all monitoring and testing as required by 40 CFR 63 Subpart UUU, including maintaining records to document conformance with procedures in CHS’s required operation, maintenance and monitoring plan (ARM 17.8.742 and 40 CFR 63 Subpart UUU).

M.17. As required by the Department and Section III.A.1, compliance with the opacity limitations listed in Section III.M.4 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

M.18. CHS shall operate and maintain CEMS/CERMS to measure SO2, O2, and volumetric flow from the Zone A SRU TGI stack (SRU-AUX-4). Compliance with the emission limitations contained in Section III.M.7, III.M.8, III.M.9, III.M.10, and III.M.11 shall be monitored using data from the CEMS required by Exhibit A, Section 6(B)(1) and (2) and in accordance with the appropriate equation(s) in Exhibit A, Section 2(A)(1), (7), (9), and (14) except when CEMS/CERMS data is not available as provided in Exhibit A, Section 2(A)(14) of the Stipulation (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003; and 40 CFR 60 Subpart J).


M.20. For the Zone A SRU TGI stack (SRU-AUX-4) CEMS, 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) (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

M.21. To accurately determine the SO2 emission rates in pounds per hour for the Zone A SRU TGI stack (SRU-AUX-4), CHS shall perform annual source testing using EPA-approved methods (40 CFR 60, Appendix A, Methods 1-4 and 6/6c as appropriate for this Stipulation and Exhibit A), 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). The annual RATAs required by Sections 6 (C) and (D) may substitute for the annual source tests provided that the flow rate RATA and the concentration RATA are performed simultaneously and additional calculations are made to determine and report the data in pounds per hour of SO2.
M.22. All continuous stack gas flow rate monitors required by the Stipulation shall be installed, certified (on a flow rate basis), and operated in accordance with Department Method A-1 of Attachment #1 and be subject to and meet (on a flow rate basis) the quality assurance and quality control requirements of Department Method B-1 of Attachment #1 (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

M.23. CEMS/CERMS 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 CEMS is unable to meet minimum availability requirements, CHS shall provide a back-up or alternative monitoring system and plan such that continuous compliance can be demonstrated (ARM 17.8.1213).

M.24. CHS shall test the Zone A TGI (SRU-AUX-4) stack for SO₂ once every three years and for NOₓ on an every 6-year basis, or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and 17.8.749).

M.25. As required by the Department and Section III.A.1, compliance with the PM limit in Section III.M.11 shall be monitored according to 40 CFR 60, Appendix A, Method 5 (ARM 17.8.1213).

M.26. Compliance with Section III.M.12 shall be monitored by maintaining the Zone A TGI (SRU-AUX-4) stack at a height no less than 132 feet (ARM 17.8.1213).

M.27. Compliance with Section III.M.13 shall be monitored by not firing fuel oil in this unit (ARM 17.8.1213).

Recordkeeping

M.28. CHS shall perform all source test recordkeeping in accordance with the appropriate test method and Section III.A.2 (ARM 17.8.106).

M.29. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart J, including for the Zone A SRU TGI stack (SRU-AUX-4) and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart J).

M.30. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart QQQ (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

M.31. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 63 Subpart UUU (ARM 17.8.342 and 40 CFR 63 Subpart UUU).

M.32. CHS shall maintain records documenting the stack height to demonstrate compliance with Section III.M.12 (ARM 17.8.1213).
M.33. CHS shall maintain records that fuel oil was not fired in this unit to document compliance with Section III.M.27 (ARM 17.8.1213).

**Reporting**

M.34. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

M.35. CHS shall notify the Department in writing of each source test a minimum of 25 working days prior to the actual testing, unless otherwise specified by the Department (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

M.36. CHS shall notify the Department in writing of each RATA a minimum of 25 working days prior to the actual testing, unless otherwise specified by the Department (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

M.37. CHS shall provide the Department copies of testing results, monitoring operations, recordkeeping, and report results as specified under 40 CFR 60 Subpart QQQ, Sections 60.693-2, 60.696, 60.697, and 60.698 (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

M.38. CHS shall submit quarterly emission reports to the Department within 30 days of the end of each calendar quarter. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or uploaded to the State of Montana’s File Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service. The quarterly report shall include the following (ARM 17.8.749):

a. Emission reporting for sulfur dioxide from the emission rate monitor shall consist of a daily 24-hour average (ppm, corrected to 0% O₂) and a 24-hour total (lb/day) for each calendar day;

b. Source or unit operating time during the reporting period;

c. Quarterly fuel gas consumption rates;

d. Monitoring downtime that occurred during the reporting period;

e. A summary of excess emissions or applicable concentrations for each pollutant and the averaging period identified in Section III.M.8-M.10;

f. Compliance determinations for hourly, 24-hour and annual limits specifically allowed in Section III.M.8-M.10 (ARM 17.8.749); and

g. Reasons for any emissions in excess of those specifically allowed in Section III.M.8-M.10 with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.
M.39. In accordance with Section 7 of the Stipulation (Appendix E of this permit), CHS 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 Division office in Helena and to the Regional Office from which the Compliance Officer assigned to this facility is based. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO₂ Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

M.40. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

M.41. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. A summary of the records required by Section III.M.32 and III.M.33;

c. A summary of compliance with applicable sections of 40 CFR 60 Subpart J, including the Zone A SRU TGTU TGI stack (SRU-AUX-4) and any other equipment, as appropriate This reporting requirement does not require the permittee to submit any 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 60 Subpart QQQ during the reporting period. This reporting requirement does not require the permittee to submit any 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 63 Subpart UUU during the reporting period. This reporting requirement does not require the permittee to submit any report or compliance status determination earlier than is required by 40 CFR 63 Subpart UUU;

f. A summary of compliance with unit emission limits and conditions of this section and dates that quarterly reports were submitted as required by Section III.M.38; and

g. A summary of compliance with Stipulation limits and dates that quarterly reports were submitted as required by Section III.M.39.
### EU013 – Steam Generation Units

*Boiler #9, Boiler #10, Boiler #11, and Boiler #12*

<table>
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<tr>
<th>Condition(s)</th>
<th>Pollutant/Parameter</th>
<th>Permit Limit</th>
<th>Compliance Demonstration Method</th>
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<th>Reporting Requirements</th>
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<td>Monthly and/or Quarterly</td>
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<td>On-going</td>
<td>Quarterly</td>
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<td>0.05 lb/MMBtu-HHV, 365-day rolling average; 21.88 tons/rolling 12-calendar month total; 5.0 lb/hr</td>
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<td>N.11, N.31, N.34, N.38,</td>
<td>VOC Boiler #10</td>
<td>2.24 tons/rolling 12-calendar month</td>
<td>Firing Only Natural Gas</td>
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<td>Frequency</td>
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<td>N.48, N.57, N.58, N.60, N.61</td>
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<td>Method 18 (when firing RFG)</td>
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<td>N.12, N.46, N.55, N.60, N.61</td>
<td>Boiler #10</td>
<td>Stack height no less than 75 feet from ground level, Ultra-Low NOx Burners, FGR, steam injection to the flame zone</td>
<td>Recordkeeping</td>
<td>Ongoing</td>
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<tr>
<td>N.13, N.29, N.39, N.58, N.59, N.60, N.61</td>
<td>SO2 Boiler #11</td>
<td>3.92 lb/hour and 8.59 tons/rolling 12-calendaryear</td>
<td>RFG System H2S CEMS, see Section B</td>
<td>On-going</td>
<td>Quarterly</td>
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<td>N.14, N.32, N.35, N.39, N.40, N.42, N.44, N.48, N.57, N.58, N.60, N.61</td>
<td>NOx Boiler #11</td>
<td>6.27 lb/hour, rolling 365-day average and 27.5 tons/rolling 12-calendar month total</td>
<td>Method 7 CEMS/F-Factor Calc</td>
<td>Every Three Years</td>
<td>Ongoing</td>
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<td>N.15, N.32, N.35, N.42, N.44, N.48, N.57, N.58, N.60, N.61</td>
<td>CO Boiler #11</td>
<td>400 ppmv at 3% O2/30-day rolling average; 15.26 lb/hr; and 36.63 tons/rolling 12-calendar month</td>
<td>Method 10 CEMS</td>
<td>Every Three Years</td>
<td>Ongoing</td>
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<td>N.16, N.34, N.37, N.58, N.60, N.61</td>
<td>VOC Boiler #11</td>
<td>4.83 tons/rolling 12-calendar months</td>
<td>Certify</td>
<td>Ongoing</td>
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<td>N.17, N.29, N.58, N.60, N.61</td>
<td>SO2 Boiler #12</td>
<td>3.60 lb/hr; 7.88 tons/rolling 12-calender months; 0.05 gr/dscf (81 ppmv) H2S rolling 12-month average</td>
<td>RFG System H2S CEMS, see Section B</td>
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<td>CEMS / F-Factor Calc</td>
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<td>CO Boiler #12</td>
<td>400 ppmvd at 3% O2/30-day rolling average; 15.26 lb/hr; 36.63 tons/rolling 12-calendar months</td>
<td>CEMS</td>
<td>On-going</td>
<td>Quarterly</td>
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<tr>
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<td>Condition(s)</td>
<td>Pollutant/Parameter</td>
<td>Permit Limit</td>
<td>Compliance Demonstration Method</td>
<td>Frequency</td>
<td>Reporting Requirements</td>
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<td>N.20, N.34, N.37, N.58, N.61, N.60</td>
<td>VOC Boiler #12</td>
<td>4.81 tons/rolling 12-calendar months</td>
<td>Certify</td>
<td>Ongoing</td>
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<td>N.21, N.47, N.56, N.60, N.61</td>
<td>Boiler #12 NOx Control</td>
<td>Fit with ULNB with FGR</td>
<td>Recordkeeping</td>
<td>On-going</td>
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**Conditions**

N.1. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. These regulations shall apply to Boilers #10, #11, and #12, and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart Db).

N.2. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart GGG-Equipment Leaks of VOC in Petroleum Refineries, including compliance with specific requirements in Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart GGG applies to the various pumps, valves, flanges, and other equipment in VOC service within the refinery fuel gas supply lines to Boilers #10 and #11 (ARM 17.8.340 and 40 CFR 60 Subpart GGG).

N.3. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart GGGa-Equipment Leaks of VOC in Petroleum Refineries, including compliance with specific requirements in Subpart VVa—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. These subparts apply to the various pumps, valves, flanges, and other equipment in VOC service within the refinery fuel gas supply lines to Boiler #12, and any other equipment constructed or modified after November 7, 2006 (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).

N.4. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart Ja – Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007 (ARM 17.8.340 and 40 CFR 60 Subpart Ja) (Boiler #12 is required to comply with the SO\(_2\) emission limit or the H\(_2\)S in fuel gas limit, however, Boiler #12 does not meet the NSPS Subpart Ja definition of a process heater and is not subject to the NO\(_x\) emission limitations in Subpart Ja).

N.5. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD):

N.6. Fuel oil combustion in all refinery boilers is prohibited (ARM 17.8.749).

N.7.Opacity from Boiler #9, Boiler #10, Boiler #11, and Boiler #12 shall not exceed 20%, averaged over any 6 consecutive minutes (ARM 17.8.304(2)). During the building of new fires, cleaning of grates, or soot blowing, the provisions of ARM 17.8.304(1) and (2) shall apply, except that a maximum average opacity of 60% is permissible for not more than one
4-minute period in any 60 consecutive minutes. Such a 4-minute period means any 4 consecutive minutes (ARM 17.8.304(3)).

N.8. SO$_2$ emissions from Boiler #10 shall not exceed:
   a. 60 ppmv H$_2$S in refinery fuel gas, 365-day rolling average (ARM 17.8.752)
   b. 4.14 tons/rolling 12-calendar month total (ARM 17.8.749)
   c. 2.53 lb/hr (ARM 17.8.752)

N.9. NO$_x$ emissions from Boiler #10 shall not exceed:
   a. 0.03 pounds per million British thermal units – Higher Heating Value (lb/MMBtu-HHV), 365-day rolling average (ARM 17.8.752)
   b. 13.13 tons/rolling 12-calendar month total (ARM 17.8.749)
   c. 3.5 lb/hr (ARM 17.8.749)

N.10. During periods of startup or shutdown, CO emissions from Boiler #10 shall not exceed 10.0 lb/hr, 24-hour rolling average (ARM 17.8.752). Otherwise, CO emissions shall not exceed:
   a. 0.05 lb/MMBtu-HHV, 365-day rolling average (ARM 17.8.752)
   b. 21.88 tons/rolling 12-calendar month total (ARM 17.8.749)
   c. 5.0 lb/hr (ARM 17.8.749)

N.11. VOC emissions from Boiler #10 shall not exceed 2.24 tons/rolling 12-calendar month total (ARM 17.8.752).

N.12. Boiler #10 shall be fitted with ULNBs, flue gas recirculation (FGR) and steam injection to the flame zone (ARM 17.8.752), and have a minimum stack height of 75 feet above ground level (ARM 17.8.749).

N.13. SO$_2$ emissions from Boiler #11 shall not exceed 3.92 lb/hour and 8.59 tons/rolling 12-calendar months (ARM 17.8.752).

N.14. NO$_x$ emissions from Boiler #11 shall not exceed 6.27 lb/hour, rolling 365-day average and 27.5 tons/rolling 12-calendar month total (ARM 17.8.752).

N.15. During periods of startup or shutdown, CO emissions from Boiler #11 shall not exceed 23 lb/hr on a 24-hour rolling average (ARM 17.8.752). Otherwise, CO emissions from Boiler #11 shall not exceed 400 ppm$_{eq}$ at 3% O$_2$ per 30-day rolling average, 15.26 lb/hour, and 36.63 tons/rolling 12-calendar months (ARM 17.8.752).

N.16. VOC emissions from Boiler #11 shall not exceed 4.83 tons/rolling 12-calendar months (ARM 17.8.752).
N.17. SO\textsubscript{2} emissions from Boiler #12 shall not exceed 3.60 lb/hour, 5.84 tons/rolling 12-calendar months, and 60 ppmvd H\textsubscript{2}S refinery fuel gas on a rolling 365-calendar day average (40 CFR 60 Subpart Ja, ARM 17.8.340, ARM 17.8.752).

N.18. NO\textsubscript{x} emissions from Boiler #12 shall not exceed 6.27 lb/hour, rolling 365-day average and 27.5 tons/rolling 12-calendar month total (ARM 17.8.752).

N.19. During periods of startup or shutdown, CO emissions from Boiler #12 shall not exceed 23 lb/hr on a 24-hour rolling average (ARM 17.8.752). Otherwise, CO emissions from Boiler #12 shall not exceed 400 ppm, at 3% O\textsubscript{2} per 30-day rolling average, 15.26 lb/hour, and 36.63 tons/rolling 12-calendar months (ARM 17.8.752).

N.20. VOC emissions from Boiler #12 shall not exceed 4.81 tons/rolling 12-calendar months (ARM 17.8.752).

N.21. Boiler #12 shall be fitted with ultra-low NO\textsubscript{x} burners with FGR (ARM 17.8.752).

**Compliance Demonstration**

N.22. CHS shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. These regulations shall apply to Boilers #10, #11, and #12 and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart Db).

N.23. CHS shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart GGG, Equipment Leaks of VOC in Petroleum Refineries. As applicable, these regulations shall apply to Boilers #10 and #11, and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart GGG).

N.24. CHS shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart GGGa, Equipment Leaks of VOC in Petroleum Refineries. These regulations shall apply to Boilers #12, and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).

N.25. CHS shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart Ja – Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007. This subpart applies to Boiler #12 (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

N.26. CHS shall demonstrate compliance with 40 CFR 63 Subpart DDDDD as required by Subpart DDDDD including maintaining on-site an annual report containing the information required in 40 CFR 63.7540 (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

N.27. Compliance with Section III.N.6 shall be demonstrated by recording fuel type fired in all refinery boilers (ARM 17.8.1213).
N.28. As required by the Department and Section III.A.1, compliance with the opacity limitations listed in Section III.N.7 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.749 and ARM 17.8.1213).

N.29. Compliance monitoring for SO2 limits for Boilers #10, #11, and #12 shall be based upon continuous H2S concentration monitor data and fuel gas flowmeter data as required in Section III.B (ARM 17.8.749).

N.30. CHS shall operate and maintain CEMS/CERMS on the Boiler #10 stack for NOx and O2 (ARM 17.8.1213, ARM 17.8.340, and 40 CFR 60 Subpart Db). CHS shall operate and maintain CEMS/CERMS on the Boiler #10 stack for CO (ARM 17.8.749).

N.31. Boiler #10 shall be tested for NOx, and CO, concurrently (using Methods 7 and 10, in accordance with Section III.A.2 (ARM 17.8.106)) at a minimum of every 5 years or another testing/monitoring schedule as may be approved by the Department, and shall be conducted for both natural gas and refinery fuel gas. Testing for VOC shall be at the request of the Department (ARM 17.8.1213).

N.32. CHS shall operate and maintain CEMS/CERMS on the Boiler #11 stack for NOx and O2 (ARM 17.8.340 and 40 CFR 60 Subpart Db), and CO (ARM 17.8.1213).

N.33. CHS shall operate and maintain CEMS/CERMS on the Boiler #12 stack for NOx (ARM 17.8.340 and 40 CFR 60 Subpart Db); O2 (ARM 17.8.340 and 40 CFR 60 Subpart Db); and CO (ARM 17.8.1213).

N.34. Firing Boiler #10, Boiler #11, and Boiler #12 solely on natural gas shall demonstrate compliance with the applicable VOC limits (ARM 17.8.749).

N.35. Boiler #11 shall be tested for NOx, and CO concurrently (using Methods 7 and 10, respectively, in accordance with Section III.A.2 (ARM 17.8.106)) once every three years, or another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.106).

N.36. Boiler #12 shall be tested once every three years, or according to another testing/monitoring schedule as may be approved by the Department, for NOx and CO concurrently, and the results submitted to the Department in order to demonstrate compliance with the NOx and CO emission limits contained in Sections III.N.18 and III.N.19 (ARM 17.8.105 and ARM 17.8.749).

N.37. CHS shall monitor compliance with the VOC limits for Boilers #11 and #12 listed in Sections III.N.16 and III.N.20 through maintaining records of the fuel gas consumed and using an appropriate emission factor as approved by the Department (ARM 17.8.1213).

N.38. In addition to the testing required in Section III.N.31 compliance monitoring for VOC emission limits for Boiler #10 shall be based upon actual fuel-burning rates and the emission factors developed from the most recent compliance source test of each fuel being combusted. New emission factors shall become effective within 60 days after the completion of a source test accepted by the Department (ARM 17.8.1213 and ARM 17.8.749).
N.39. The volumetric stack flow rate monitor shall be used in conjunction with the NOx CEMS and CO CEMS to determine compliance with the lb/hr NOx and CO limits for the Boilers (ARM 17.8.1213).

N.40. For Boilers #10, #11 and #12, compliance with lb/MMBtu limits shall be monitored using statistically significant F-factor values. The factors will be updated on a regular basis using data from all valid fuel gas samples representative of the fuel gas burned. The method of compliance monitoring involving F-factor statistical significance is subject to change upon agreement with the Department and CHS (ARM 17.8.1213 and referencing methodologies described in 40 CFR 60, Appendix A, Reference Method 19).

N.41. Boiler #10’s continuous NOx and O2 concentration monitors shall comply with all applicable provisions of 40 CFR Parts 60.5 through 60.13, Subparts Db, Appendix B (Performance Specifications 2 and 3), and Appendix F (Quality Assurance/Quality Control) provisions (ARM 17.8.1213 and ARM 17.8.749).

N.42. Boiler #11’s CEMS and CERMS required by this permit shall comply with all applicable provisions of 40 CFR Part 60.5 through 60.13, Subpart Db 60.40b through 60.49b and Appendix B, Performance Specifications 2, 3, 4 or 4A, 6, and Appendix F (ARM 17.8.1213 and ARM 17.8.749).

N.43. Boiler #12’s CEMS and CERMS required by this permit shall comply with all applicable provisions of 40 CFR Part 60.5 through 60.13, Subpart Db 60.40b through 60.49b, Appendix A, Appendix B, Performance Specifications 2, 3, 4 or 4A, 6, and Appendix F (ARM 17.8.749 and ARM 17.8.342).

N.44. CEMS 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 CEMS is unable to meet minimum availability requirements, the recipient shall provide a back-up or alternative monitoring system and plan such that continuous compliance can be demonstrated (ARM 17.8.1213).

N.45. CHS shall install and operate a volumetric stack flow rate monitor on Boilers #10, #11, and #12. The volumetric flow rate monitor shall comply with the Billings/Laurel SIP Pollution Control Plan Exhibit A, Attachment 1 Methods A-1 and B-1 (ARM 17.8.749).

N.46. Compliance with Section III.N.12 shall be monitored by ensuring that Boiler #10 operates with steam injection to the flame zone, low NOx burners and the FGR system, and that the stack remains at a height no less than 75 feet above ground level, as demonstrated through recordkeeping (ARM 17.8.1213).

N.47. Compliance with Section III.N.21 shall be monitored by ensuring that Boiler #12 operates with ultra-low NOx burners and the FGR system, as demonstrated through recordkeeping (ARM 17.8.1213).
Recordkeeping

N.48. CHS shall perform all source test recordkeeping in accordance with the appropriate test method and Section III.A.2 (ARM 17.8.106).

N.49. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart Db (ARM 17.8.340 and 40 CFR 60 Subpart Db).

N.50. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subpart GGG).

N.51. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart GGGa (ARM 17.8.340 and 40 CFR 60, Subpart GGGa).

N.52. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart Ja (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

N.53. CHS shall maintain records as required by 40 CFR 63 Subpart DDDDD (ARM 17.8.342, 40 CFR 63 Subpart DDDDD, and ARM 17.8.1212).

N.54. CHS shall maintain the records of fuel type burned as required by Section III.N.27 (ARM 17.8.1213).

N.55. CHS shall maintain inspection/operational records that Boiler #10 operated with steam injection to the flame zone, low NOx burners, and the FGR system. CHS shall record any change affecting the actual height of the stack to document compliance with Section III.N.12 (ARM 17.8.1213).

N.56. CHS shall maintain inspection/operational records that Boiler #12 operated with ULNBs and the FGR system to document compliance with Section III.N.21 (ARM 17.8.1213).

Reporting

N.57. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

N.58. CHS shall submit quarterly emission reports to the Department within 30 days of the end of each calendar quarter. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or uploaded to the State of Montana’s File Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service). The quarterly report shall include the following (ARM 17.8.749):

a. SO₂ emission data from the refinery fuel gas system continuous H₂S concentration monitor and continuous fuel gas flow rate meter required by Section B. The SO₂ emission rates shall be reported for Boilers #10, #11, & #12 for the following averaging periods.
   i. Average lb/hr per calendar day
   ii. Total lb per calendar day
iii. Total tons per month

b. NOx emission data from the CEMS, fuel gas flow rate meter, and emission factors developed from the most recent compliance source test. The NOx emission rates shall be reported for the following averaging periods.

i. Average lb/MMBtu per calendar day (Boilers #10, #11, & #12)
ii. Total tons per month (Boilers #10, #11, & #12)
iii. lb/MMBtu per rolling 30-day average (Boilers #10, #11, & #12)
iv. lb/MMBtu per rolling 365-day average (Boiler #10 and Boiler #12)
v. Daily average and maximum lb/hr (Boiler #10 and Boiler #12)

c. Source or unit operating time during the reporting period;

d. Daily, monthly, and quarterly refinery fuel gas and natural gas consumption rates, for Boiler #10 and quarterly fuel gas consumption for Boilers #11 and #12;

e. Monitoring downtime that occurred during the reporting period;

f. A summary of excess emissions or applicable concentrations for each pollutant and the averaging period identified in Sections III.N.8-N.11, N.13-N.20;

g. Compliance determinations for hourly, 24-hour and annual limits specifically allowed in Sections III.N.8-N.11, N.13-N.20; and

h. Reasons for any emissions in excess of those specifically allowed in Sections III.N.8-N.11, N.13-N.20 with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

N.59. In accordance with Section 7 of the Stipulation (Appendix E. of this permit), CHS 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 Division office in Helena and the Regional Office from which the Compliance Officer assigned to this facility is based. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

N.60. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.

N.61. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. A summary of the records required by Section III.N.54 during the reporting period. A statement that no fuel oil was burned in any boiler shall suffice for this reporting
requirement. If any fuel oil was burned in a boiler, the report shall indicate the boiler and timeframe that fuel oil was burned;

c. A summary of the records required by Section III.N.55 and III.N.56

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

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

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

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

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

i. Dates that quarterly reports were submitted as required by Section III.N.58; and

j. Dates that quarterly reports were submitted as required by Section III. N.59.

O. EU014 – Tank Farm (non-Wastewater)


  - **Refinery MACT I Group 2 Storage Vessels: Tanks 56, 61, 62, 73, 79, 80, 85, 86, 88, 91, 93, 94, 104, 111, 113, 114, 117, 120, 121, 122, 123, 126, 127, 133, 139, 144, 145, 146, 147, 148, 149, 150, and 152**

  - **Refinery MACT I Exempt: Pressure vessels, not organic HAP, not refining**

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<tr>
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<th>Permit Limit</th>
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<th>Reporting Requirements</th>
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<td>40 CFR 60 Subpart Kb</td>
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<td>40 CFR 60 Subpart UU</td>
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<td>AP-42 Calculation Methods</td>
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<td>Storage Tanks 135 and 136</td>
<td>Submerged fill piping, external floating roof</td>
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<td>VOC Tank 133</td>
<td>12.3 tons/rolling 12-calendar month</td>
<td>AP-42 Calculation Methods</td>
<td>Monthly</td>
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<td>Tank 133</td>
<td>Submerged fill with pressure/vacuum vent</td>
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<td>40 CFR 60 Subpart VVa, 40 CFR 60 Subpart GGGa An LDAR program associated with the fugitive tank components was determined to be BACT for referenced tanks. GGGa and VVa, do not apply to the fugitive components</td>
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### Conditions

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**Conditions**

**O.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 the requirements of 40 CFR 60 Subpart Kb when applicable. These requirements shall be as specified in 40 CFR 60.110b through 60.115b (The affected tanks include but are not limited to: Tanks 70, 75, 83, 96, 100, 101, 102, 108, 109, 110, 112, 135-138, 142, 143, and 153) (ARM 17.8.340 and 40 CFR 60 Subpart Kb).

**O.2.** CHS shall comply with all applicable requirements of 40 CFR 60 Subpart UU – Standards of Performance for Asphalt Processing. This subpart applies to, but is not limited to, any asphalt storage tank installed since November 18, 1980. It includes the requirement to maintain 0% opacity, except for one 15-minute period every 24-hours (ARM 17.8.340 and 40 CFR 60 Subpart UU).

**O.3.** Until the new loading rack and associated equipment are operational, the combined VOC emissions from Storage Tanks 135 and 136 shall not exceed 12.6 tons/rolling 12-calendar month total. This limit includes emissions while the roofs are floating and emissions during time periods that the tank roofs are landed on the legs (ARM 17.8.749).

**O.4.** Storage Tanks 135 and 136 shall each be equipped with an external floating roof and submerged fill piping (ARM 17.8.752).

**O.5.** VOC emissions from Storage Tank 133 shall not exceed 12.3 tons/rolling 12-calendar month total (ARM 17.8.749).

**O.6.** Storage Tank 133 shall be a fixed roof tank with a pressure/vacuum vent and submerged fill piping. While in asphalt and gas oil service, the tank may be heated and may be operated without the pressure/vacuum vent (ARM 17.8.752).

**O.7.** CHS shall comply with all applicable maintenance and monitoring program requirements as described in 40 CFR 60 Subpart VVa - Standards of Performance for Equipment Leaks of...
VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 meeting the requirements of 40 CFR 60 Subpart GGGa except for requirements specifically exempted (The applicable units include, but may not be limited to, fugitive emission components in VOC service that are associated with Tanks 133, 135-139, 142, 143, 146, 147, 152, 153, and additive tanks 1-4) (ARM 17.8.752).

O.8. Except where 40 CFR 60 Subpart UU is applicable, CHS 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 (ARM 17.8.304 (2)).

O.9. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart CC-National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, including compliance with specific requirements in 40 CFR 60 Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart CC applies to the various pumps, valves, flanges, and other equipment in organic HAP service within the Tank Farm. Subpart CC applies to, but is not limited to, all Group 1 and Group 2 Storage Vessels (ARM 17.8.342 and 40 CFR 63 Subpart CC).

O.10. VOC emissions from Storage Tanks 137, 138, 142, and 143 shall be controlled by the installation and use of an internal floating roof and submerged fill piping (ARM 17.8.340, 40 CFR 60 Subpart Kb, and ARM 17.8.752).

O.11. Storage Tank 139 shall only store #1 or #2 diesel fuel and the VOC emissions from Storage Tank 139 shall be controlled by the installation and use of a fixed roof with pressure/vacuum vents and a submerged fill piping (ARM 17.8.749).

O.12. The total annual VOC emissions from the new truck loading rack, VCU and associated equipment (which includes the new truck loading rack, VCU and all associated storage tanks (135-139, 142, 143 and Additive Tanks # 1-4), and any associated fugitives shall not exceed 39.23 TPY based on a rolling 12-calendar month total. This is total combined VOC emission limit for the applicable units listed in this Section and Section P (ARM 17.8.749).

O.13. Tank 146 and Tank 147 shall be a fixed roof tank with submerged fill piping (ARM 17.8.752).

O.14. Storage Tanks 146 and 147 shall store only intermediate products with a true vapor pressure less than 0.49 actual pounds per square inch (psia) (ARM 17.8.749).

O.15. Tank 152 shall be a fixed roof tank utilize submerged fill piping and is permitted to operate with steam coils (ARM 17.8.752).

**Compliance Demonstration**

O.16. CHS shall monitor compliance with Section III.O.1 by complying with 40 CFR 60.113b and/or 40 CFR 60.114b (ARM 17.8.340 and 40 CFR 60 Subpart Kb).
O.17.  CHS shall monitor compliance with Section III.O.2 as required by 40 CFR 60, Subpart UU (ARM 17.8.340 and 40 CFR 60 Subpart UU).

O.18.  Combined VOC emissions from Storage Tanks 135-139, 142-143 and Additive Tanks 1-4 shall be calculated and monitored utilizing AP-42 calculation methods with key parameters of throughput and material properties. Tank emissions during periods the tank roofs are landed on its legs shall be calculated using appropriate AP-42 emissions equations (ARM 17.8.749).

O.19.  CHS shall monitor compliance with Section III.O.4 through recordkeeping of maintenance/inspection of the external floating roofs (ARM 17.8.1213).

O.20.  VOC emissions from Storage Tank 133, Tank 146, Tank 147 and Tank 152 shall be calculated and monitored utilizing AP-42 equations and the AP-42 calculation methods with key parameters of throughput and material properties (ARM 17.8.749, ARM 17.8.1212).

O.21.  CHS shall document any timeframe in which asphalt or gas oil is stored in Storage Tank 133, and timeframes that the pressure vacuum vent is not operated (ARM 17.8.1213).

O.22.  CHS shall meet all the applicable requirements of 40 CFR 60 Subpart GGGa (ARM 17.8.1213).

O.23.  Except for requirements specifically exempted in 40 CFR 60 Subpart GGGa, CHS shall institute a monitoring and maintenance program as described in 40 CFR 60 Subpart VVa as applicable (ARM 17.8.749).

O.24.  As required by the Department and Section III.A.1, compliance with the opacity limitations listed in Section III.O.8 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.749 and ARM 17.8.1213).

O.25.  CHS shall meet the requirements of all testing and procedures of 40 CFR 63 Subpart CC—National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries. These regulations shall apply to the Tank Farm and any other equipment, as appropriate (ARM 17.8.342 and 40 CFR 63 Subpart CC).

O.26.  CHS shall institute the monitoring and maintenance program in accordance with 40 CFR 60 Subpart VV and 40 CFR 63 Subpart CC (ARM 17.8.342 and 40 CFR 63 Subpart CC).

O.27.  CHS shall maintain records, under CHS's control, of monitoring and maintenance activities on all applicable pumps, shutoff valves, relief valves and other piping and valves within the Tank Farm as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.340 and 40 CFR 63 Subpart CC).

O.28.  CHS shall monitor compliance with Section III.O.15 through recordkeeping of maintenance/inspection of the Tank 152 (ARM 17.8.1213).
Recordkeeping

O.29. CHS shall perform all source test recordkeeping in accordance with the appropriate test method and Section III.A.2 (ARM 17.8.106).

O.30. CHS shall maintain the records required by 40 CFR 60.115b and 40 CFR 60.116b (ARM 17.8.340 and 40 CFR 60 Subpart Kb).

O.31. CHS shall maintain records as required by 40 CFR 60 Subpart UU (ARM 17.8.340 and 40 CFR 60 Subpart UU).

O.32. CHS shall document, by month, the total VOC emissions from Storage Tanks 135-139, 142, 143; and Additive Tanks 1-4 and all associated fugitive sources. This must also include emissions while the roofs of the internal floating and external floating tanks are floating and emissions during time periods that the tank roofs are landed on the legs. This monthly information and the emissions relating to the operation of the new truck loading rack, VCU and all associated fugitives sources shall be used to verify compliance with the rolling 12-month limitation in Section III.P.16 and III.O.12, as applicable (ARM 17.8.749).

O.33. CHS shall document by month the total VOC emissions from Tanks 135 and 136. The monthly information shall be used to verify compliance with the rolling 12-month limitations listed in Section III.O.3. (ARM 17.8.749).

O.34. CHS shall document by month the total VOC emissions from Tank 133. The monthly information shall be used to verify compliance with the rolling 12-month limitations listed in Section III.O.5 (ARM 17.8.749).

O.35. CHS shall comply with the recordkeeping requirements of 40 CFR 60 Subpart GGGa for applicable tanks (Tanks 133, 135-139, 142, 143, 146, 147, 152, 153, and additive tanks 1-4) (ARM 17.8.749).

O.36. Except for requirements specifically exempted in 40 CFR 60 Subpart GGGa, CHS shall comply with the applicable monitoring and maintenance program recordkeeping requirements of 40 CFR 60 Subpart VVa for Tanks 133, 135-139, 142, 143, 146, 147, 152, 153, and additive tanks 1-4 (ARM 17.8.749).

O.37. CHS shall comply with the recordkeeping requirements of 40 CFR 63 Subpart CC and Subpart VV as applicable (ARM 17.8.342 and 40 CFR 63 Subpart CC).

O.38. CHS shall document annually the total VOC emissions from Tank 146, 147 and 152. The emissions shall be submitted with the annual emissions reporting (ARM 17.8.749). CHS shall maintain records in conjunction with Section III.O.20, as demonstration for Section III.O.14 (ARM 17.8.1212).

Reporting

O.39. Any compliance source test reports must be submitted in accordance with the Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).
O.40. CHS shall prepare and submit a quarterly emission report within 30 days of the end of each calendar quarter. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or up-loaded to the State of Montana’s File Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service. The quarterly report shall also include the 12-month rolling total VOC emissions, by month, for Storage Tank 133, and the combined 12-month rolling total VOC emissions, by month, for Storage Tanks 135 and 136 (ARM 17.8.749).

O.41. CHS shall prepare and submit a quarterly emission report within 30 days of the end of each calendar quarter. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or up-loaded to the State of Montana’s File Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service. The quarterly report shall also include the applicable 12-month rolling total VOC emissions, by month, as required to demonstrate compliance with Section III.O.12 (17.8.1212).

O.42. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

O.43. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. Dates that quarterly reports were submitted as required by Section III.O.40 and III.O.41;

c. Summary of records maintained as required by Section III.O.19;

d. Summary of records maintained as required by Section III.O.21;

e. Summary of records required by Section III.O.38;

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

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

h. Summary of compliance with the reporting requirements of 40 CFR 63 Subpart CC (including 40 CFR 60 Subpart VV) during the reporting period. This reporting requirement does not require the permittee to submit any report or compliance status determination earlier than is required by 40 CFR 63 Subpart CC; and
Summary of compliance with the reporting requirements of 40 CFR 60 Subpart GGGa (including 40 CFR 60 Subpart VVa) during the reporting period. This reporting requirement does not require the permittee to submit any report or compliance status determination earlier than is required by 40 CFR 60 Subpart GGGa.

P. EU015– Transfer Facilities

Asphalt Loading Heater #1, Truck Loading Rack and VCU, Railcar Product Loading Rack and VCU, Railcar Gasoline Component Unloading

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<td></td>
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<td>Certify</td>
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<td>Semiannually</td>
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<td>P.5, P.23, P.25, P.35, P.42, P.44, P.45</td>
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<td>10 mg/L of Gasoline Loaded</td>
<td>40 CFR 63.425</td>
<td>Every 5 Years</td>
<td>Semiannually</td>
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<td>P.6, P.24, P.25, P.32, P.35, P.42, P.44, P.45</td>
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<td>10 mg/L of Gasoline Loaded</td>
<td>Method 10</td>
<td>As Required by the Department and Section III.A.1</td>
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<tr>
<td>P.7, P.24, P.25, P.35, P.42, P.44, P.45</td>
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<td>4 mg/L of Gasoline Loaded</td>
<td>Method 7</td>
<td>As Required by the Department and Section III.A.1</td>
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<td>0.10 gr/dscf corrected to 12% CO₂</td>
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<td>As Required by the Department and Section III.A.2</td>
<td>Semiannually</td>
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<td>Certify</td>
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<td>40 CFR 60 Subpart XX</td>
<td>40 CFR 60 Subpart XX</td>
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<tr>
<td>P.16, P.22, P.44, P.45</td>
<td>Railcar Gasoline Component Unloading Facilities</td>
<td>CHS shall provide the Department with written notification of construction and the date CHS begins to receive gasoline component material via railcar</td>
<td>Notification</td>
<td>Initiation</td>
<td>Semiannually</td>
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Conditions

P.1. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart CC-National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, including the requirement to comply with specific requirements under 40 CFR 63 Subpart R. These regulations shall apply to the truck loading rack and vapor combustion unit (VCU), as well as the railcar light product loading rack and VCU, and any other equipment, as appropriate (ARM 17.8.342 and 40 CFR 63 Subpart CC).

P.2. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD):

P.3. The truck loading rack and the railcar light product loading rack and their VCUs shall be operated and maintained as follows:

a. CHS's product loading rack shall be equipped with a vapor collection system designed to collect the organic compound vapors displaced from cargo tanks during gasoline product loading (ARM 17.8.342, ARM 17.8.752 and 40 CFR 63 Subpart CC).

b. CHS's collected vapors shall be routed to the VCU at all times. In the event the VCU is inoperable, CHS may continue to load distillates with a Reid vapor pressure of less than 27.6 kilopascals, provided the Department is notified in accordance with the requirements of ARM 17.8.110 (ARM 17.8.749).

c. The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the gasoline cargo tank from exceeding 4,500 Pascals (Pa) (450 millimeters (mm) of water) during product loading. This level shall not be exceeded when measured by the procedures specified in the test methods and procedures in 40 CFR 60.503(d) (ARM 17.8.342 and 40 CFR 63 Subpart CC).

d. No pressure-vacuum vent in the permitted terminal's vapor collection system shall begin to open at a system pressure less than 4,500 Pa (ARM 17.8.342 and 40 CFR 63 Subpart CC).

e. The vapor collection system shall be designed to prevent any VOC vapors collected at one loading rack from passing to another loading rack (ARM 17.8.342 and 40 CFR 63 Subpart CC).

f. Loadings of liquid products into truck gasoline cargo tanks shall be limited to vapor-tight gasoline cargo tanks using the following procedures (ARM 17.8.342 and 40 CFR 63 Subpart CC):

i. CHS shall obtain annual vapor tightness documentation described in the test methods and procedures in 40 CFR 63.425(c) for each truck gasoline cargo tank that is to be loaded at the product loading rack.

ii. CHS shall require the cargo tank identification number to be recorded as each gasoline cargo tank is loaded at the terminal.
iii. CHS shall cross-check each tank identification number obtained during product loading with the file of tank vapor tightness documentation within 2 weeks after the corresponding cargo tank is loaded.

iv. CHS shall notify the owner or operator of each non-vapor-tight cargo tank loaded at the product loading rack within 3 weeks after the loading has occurred.

v. CHS shall take the necessary steps to ensure that any non-vapor-tight cargo tank will not be reloaded at the product loading rack until vapor tightness documentation for that cargo tank is obtained, which documents that:

   aa. The truck gasoline cargo tank meets the applicable test requirements in 40 CFR 63.425(e).

   bb. For each gasoline cargo tank failing the test requirements in 40 CFR 63.425(f) or (g), the gasoline cargo tank must either:

      i. Before the repair work is performed on the cargo tank, meet the test requirements in 40 CFR 63.425 (g) or (h), or

      ii. After repair work is performed on the cargo tank before or during the tests in 40 CFR 63.425 (g) or (h), subsequently passes the annual certification test described in 40 CFR 63.425(c).

vi. Loadings of liquid products into railcar gasoline cargo tanks shall be limited to vapor-tight gasoline cargo tanks (ARM 17.8.342 and ARM 17.8.752).

vii. CHS shall ensure that loadings of gasoline cargo tanks at the product loading rack are made only into cargo tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system (ARM 17.8.342 and 40 CFR 63 Subpart CC).

viii. CHS shall ensure that the terminal's and the cargo tank's vapor recovery systems are connected during each loading of a gasoline cargo tank at the truck loading rack (ARM 17.8.342 and 40 CFR 63 Subpart CC).

g. Loadings of liquid products into railcar gasoline cargo tanks shall be limited to vapor-tight gasoline cargo tanks (ARM 17.8.342 and ARM 17.8.752).

h. CHS shall ensure that loadings of gasoline cargo tanks at the product loading rack are made only into cargo tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system (ARM 17.8.342 and 40 CFR 63 Subpart CC).

i. CHS shall ensure that the terminal's and the cargo tank's vapor recovery systems are connected during each loading of a gasoline cargo tank at the truck loading rack (ARM 17.8.342 and 40 CFR 63, Subpart CC).

j. The truck loading rack VCU stack shall be at least 40 feet above grade (ARM 17.8.749).
P.4. For railcar gasoline component unloading, CHS shall implement proper design and operating practices while unloading gasoline components via railcars (ARM 17.8.752).

P.5. The total VOC emissions to the atmosphere from the truck loading VCU or the railcar loading VCU due to loading liquid product into cargo tanks shall not exceed 10.0 milligrams per liter (mg/L) of gasoline loaded (ARM 17.8.342 and ARM 17.8.752).

P.6. The total CO emissions to the atmosphere from the truck loading VCU or the railcar loading VCU due to loading liquid product into cargo tanks shall not exceed 10.0 mg/L of gasoline loaded (ARM 17.8.752).

P.7. The total NOx emissions to the atmosphere from the truck loading VCU or the railcar loading VCU due to loading liquid product into cargo tanks shall not exceed 4.0 mg/L of gasoline loaded (ARM 17.8.752).

P.8. The total PM emissions from the atmosphere from the railcar light product loading VCU shall not exceed 0.10 gr/dscf corrected to 12% CO2 (ARM 17.8.752).

P.9. CHS shall not cause or authorize to be discharged into the atmosphere from the enclosed railcar light product loading rack VCU any visible emissions that exhibit an opacity of 10% or greater (ARM 17.8.752).

P.10. For the truck loading VCU, CHS shall install and operate a continuous parameter monitoring system capable of measuring temperature in the firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs (ARM 17.8.342, ARM 17.8.752, 40 CFR 63 Subpart CC).

P.11. CHS shall install and continuously operate and maintain a thermocouple and an associated recorder for temperature monitoring in the firebox or ductwork immediately downstream in a position before any substantial heat occurs, and develop an operating parameter value in accordance with the provisions of 40 CFR 63.425 and 63.427 for the railcar light product VCU. CHS shall install and continuously operate an ultraviolet flame detector and relay system which will render the loading rack inoperable if a flame is not present at the railcar light product VCU firebox, or any other equivalent device to detect the presence of a flame (ARM 17.8.342 and ARM 17.8.752).

P.12. CHS shall monitor and maintain all pumps, shutoff valves, relief valves and other piping and valves associated with the gasoline truck and railcar light loading racks as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.749; ARM 17.8.342; and 40 CFR 63 Subpart CC).

P.13. A monitoring and maintenance program, as described under 40 CFR 60 Subpart VVa, and meeting the requirements of 40 CFR 60 Subpart GGGa shall be instituted for the following:


b. Railcar gasoline component unloading (ARM 17.8.340 and ARM 17.8.752).
P.14. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart Ja - Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007 (ARM 17.8.340 and 40 CFR 60 Subpart Ja). (The Gasoline and Distillate Truck Loading Rack VCU is subject to Subpart Ja as a fuel combustion device burning fuel gas which is inherently low in sulfur content. The VCU does not meet the definition of a process heater and therefore is not subject to the NOX emissions limitations of Subpart Ja).

P.15. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart XX- Standards of Performance for Bulk Gasoline Terminals (ARM 17.8.340 and 40 CFR 63 Subpart XX – applies to the gasoline and distillate truck loading rack).

P.16. The total annual VOC emissions from the truck loading rack, VCU and associated equipment (which includes all associated storage tanks (135-139, 142, 143 and Additive Tanks # 1-4), and any associated fugitives shall not exceed 39.23 TPY based on a rolling 12-calendar month total. This is total combined VOC emission limit for the applicable units listed in this section and the applicable tanks (Tanks 135-139, 142, 143 and Additive tanks #1-4) in Section O (ARM 17.8.749).

**Compliance Demonstration**

P.17. CHS shall perform the testing and monitoring procedures specified in 40 CFR §63.425 and 63.427 of Subpart R, except §63.425(d) or §63.427(c) (ARM 17.8.342 and 40 CFR 63 Subpart CC).

P.18. CHS shall comply with all test methods and procedures as specified by Subpart R §63.425 (a) through (c), and §63.425 (e) through (h). This shall apply to, but not be limited to, the product loading racks, the vapor processing systems, and all gasoline equipment located at the product loading racks (ARM 17.8.342 and 40 CFR 63 Subpart CC).

P.19. CHS shall demonstrate compliance with 40 CFR 63 Subpart DDDDD as required by Subpart DDDDD including maintaining on-site an annual report containing the information required in 40 CFR 63.7540 (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

P.20. Compliance with Section III.P.3.j. shall be monitored by ensuring that the truck loading rack VCU stack is no less than 40 feet above grade, as demonstrated by recordkeeping (ARM 17.8.1213).

P.21. Compliance with Section III.P.3 shall be monitored by certifying proper design and operating practices were used while unloading gasoline components via railcars (ARM 17.8.1213).

P.22. CHS shall document activities related to commence as defined in ARM 17.8.801(8) and construction as defined in ARM 17.8.740(4) (ARM 17.8.1213).

P.23. The truck loading rack VCU shall be tested for VOCs, and compliance monitored with the emission limitation contained in Section III.P.5, on an every 5-year basis or another testing/monitoring schedule as may be approved by the Department. CHS shall perform
the test methods and procedures as specified in 40 CFR 63.425, Subpart R (ARM 17.8.105; ARM 17.8.342; and 40 CFR 63 Subpart CC).

P.24. The truck loading rack and railcar light product loading rack VCUs shall each be tested for CO and NOx, concurrently (using Methods 10 and 7 respectively, in accordance with Section III.A.2 (ARM 17.8.106)), and compliance monitored with the CO and NOx emission limitations contained in Section III.P.6 and III.P.7 as required by the Department (ARM 17.8.105).

P.25. Fuel flow rates, production information, and any other data the Department believes is necessary shall be recorded during the performance of source tests (ARM 17.8.749).

P.26. CHS shall monitor compliance with Section III.P.8 by conducting a Method 5 stack test, as required by the Department (ARM 17.8.1213).

P.27. As required by the Department and Section III.A.1, compliance with the opacity limitations listed in Sections III.P.9 shall be monitored using EPA Reference Method 9 testing by a qualified observer (ARM 17.8.1213).

P.28. Compliance with Section III.P.10 shall be monitored by operating and maintaining a continuous parameter monitoring system capable of measuring temperature in the firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs (ARM 17.8.1213).

P.29. Compliance with Section III.P.11 shall be monitored by maintaining a thermocouple and an associated recorder to detect the operating temperature of the firebox, and an ultraviolet flame detector and relay system, which will render the railcar loading rack inoperable if a flame is not present at the VCU flare tip, or any other equivalent device, is operating to detect the presence of a flame (ARM 17.8.1213).

P.30. CHS shall maintain records, under CHS's control, of monitoring and maintenance activities on all pumps, shutoff valves, relief valves and other piping and valves associated with the gasoline loading racks as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.1213).

P.31. CHS shall maintain records, under CHS's control of monitoring and maintenance activities, as described under 40 CFR 60 Subpart VVa, and meeting the requirements of 40 CFR 60 Subpart GGGa (ARM 17.8.749).

P.32. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart Ja - Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007 (ARM 17.8.340 and 40 CFR 63 Subpart Ja).

P.33. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart XX - Standards of Performance for Bulk Gasoline Terminals (ARM 17.8.340 and 40 CFR 63 Subpart XX).

P.34. CHS shall demonstrate compliance with the limit in Section III.P.16 by calculating and tracking actual VOC emissions monthly for the rolling 12-month total VOC emissions (ARM 17.8.749).
Recordkeeping

P.35. All source test recordkeeping shall be performed in accordance with the appropriate test method being used and Section III.A.2 (ARM 17.8.106).


a. Subpart CC - CHS shall keep all records as required by 40 CFR 63.428 (b) and (c), (g)(1), and (h)(1) through (h)(3) of Subpart R.

b. Subpart CC - CHS shall keep all records as required by 40 CFR 63.654.

P.37. CHS shall maintain records as required by 40 CFR 63 Subpart DDDDD (ARM 17.8.342, 40 CFR 63 Subpart DDDDD, and ARM 17.8.1212).

P.38. CHS shall maintain records that the VCU stack meets the requirements of Section III.P.3j (ARM 17.8.1213).

P.39. CHS shall maintain records that:

a. A continuous parameter monitoring system, capable of measuring temperature in the firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs, is operating to demonstrate compliance with Section III.P.28; and

b. A thermocouple and an associated recorder is operating to detect the operating temperature of the firebox, and that an ultraviolet flame detector and relay system, which will render the railcar loading rack inoperable if a flame is not present at the VCU flare tip, or any other equivalent device, is operating to detect the presence of a flame, to document compliance with Section III.P.29 (ARM 17.8.1213).

P.40. CHS shall maintain records that proper design and operating practices were implemented while unloading gasoline components via railcars (ARM 17.8.1212).

P.41. CHS shall record the number of gallons of gasoline component material unloaded via railcars and the subsequent Reid vapor pressure of the material (ARM 17.8.1212).

Reporting

P.42. Any compliance source test reports must be submitted in accordance with the Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

P.43. CHS shall supply the Department with the following reports, as required by 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (ARM 17.8.342 and 40 CFR 63 Subpart CC).

a. Subpart CC - CHS shall furnish all reports to the Department as required by 40 CFR 63.428 (b) and (c), (g)(1), and (h)(1) through (h)(3) of Subpart R.
b. Subpart CC - CHS shall furnish all reports to the Department as required by 40 CFR 63.654.

P.44. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

P.45. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. A summary of the records required by Section III.P.38, III.P.39, III.P.40, III.P.41 during the reporting period;

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

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

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

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

g. A summary of compliance with unit emission limits and conditions of this section.

Q. EU016 – Wastewater Treatment Units

Separators
API separators: T-23A/B, TK-3437, TK-3447
Separators – slop oil facilities: T-16, T-17, T-18
Dissolved gas flotation units: TK-3448, TK-3458
Other Separators: TK-23, T-14

Storage Vessels
Wastewater: T-20, T-25, TK-25, TK-3436
Slop Oil: TK-44, TK-118
**Sour Water:** TK-128, TK-129
**Foam/sludge:** TK-3449, TK-3450, TK3451

**Control Devices:**
- F-3401A/B/C Activated Carbon Beds
- 034IN0001 Wastewater Area Combustor

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**Conditions**

**Q.1.** CHS shall comply with all requirements of 40 CFR 60 Subpart QQQ-Standards of Performance for VOC Emissions. This subpart applies to, but is not limited to TK-23, T-23A/B, T-16, T-17, T-18 and TK-3436, and any other applicable equipment. All equipment shall be operated and maintained as required under 40 CFR 60 Subpart QQQ (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

**Q.2.** All volatile organic storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction or modification commenced after July 23, 1984, shall comply with the requirements of 40 CFR 60 Subpart Kb. These requirements shall be as specified in 40 CFR 60.110b through 60.115b (ARM 17.8.340 and 40 CFR 60 Subpart Kb).
Q.3. VOC emissions from the Sour Water Storage Tanks (Tanks #128 & #129) shall be controlled by the installation and use of internal floating roofs and submerged fill pipes (ARM 17.8.752).

Q.4. CHS shall equip, operate, and maintain the API Separators (TK-3437 and TK-3447) with a vapor collection system to collect and route emissions from the enclosed vapor space to a carbon adsorption system or thermal combuster to comply with 40 CFR 60 Subpart QQQ (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart QQQ).

Q.5. CHS shall equip, operate, and maintain the Dissolved Gas Flotation (DGF) Units (TK-3448 and TK-3458) with a vapor collection system to collect and route emissions from the enclosed vapor space to a carbon adsorption system or thermal combuster that meets the requirements of 40 CFR 60 Subpart QQQ. These two units are not subject to 40 CFR 60 Subpart QQQ (ARM 17.8.752).

Q.6. CHS shall implement a Leak Detection and Repair (LDAR) program meeting 40 CFR 60 Subpart GGGa for all new components in VOC service installed as a part of the thermal combuster project system (ARM 17.8.752).

Q.7. CHS shall comply with 40 CFR 63 Subpart CC including as applicable to Tank 128 and 129 (ARM 17.8.342 and 40 CFR 63 Subpart CC).

Compliance Demonstration

Q.8. CHS shall meet the requirements of all applicable testing and procedures of 40 CFR 60 Subpart QQQ-Standards of Performance for VOC Emissions. These regulations shall apply all equipment subject to Subpart QQQ, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

Q.9. CHS shall monitor compliance with Section III.Q.2 by complying with 40 CFR 60.113b and/or 40 CFR 60.114b (ARM 17.8.340 and 40 CFR 60 Subpart Kb).

Q.10. Compliance with Section III.Q.3 shall be monitored by maintaining the submerged fill and internal floating roofs on the sour water storage tanks, as demonstrated through recordkeeping (ARM 17.8.1213).

Q.11. Whether a carbon adsorber is used for VOC emissions reduction or whether a thermal incinerator is used for VOC control, CHS shall comply with the appropriate monitoring as required by 40 CFR 60.695 to demonstrate compliance with Sections III.Q.4 and Q.5 (ARM 17.8.749 and 40 CFR Subpart QQQ).

Q.12. When a carbon adsorber is used, the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system(s) shall be monitored on a daily basis or at intervals no greater than 20% of the design carbon replacement interval. The existing carbon shall be replaced with fresh carbon immediately when carbon breakthrough is indicated (ARM 17.8.749 and ARM 17.8.1213).
Q.13. Compliance with III.Q.6 shall be demonstrated by complying with 40 CFR 60 Subpart GGGa for all new components in VOC service installed as a part of the thermal combustor project system (40 CFR 60 Subpart GGGa and ARM 17.8.749).

Q.14. CHS shall monitor compliance with 40 CFR 63 Subpart CC as required by 40 CFR 63 Subpart CC (ARM 17.8.1213).

**Recordkeeping**

Q.15. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart QQQ (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

Q.16. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60.115b and 40 CFR 60.116b (ARM 17.8.340 and 40 CFR 60 Subpart Kb).

Q.17. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 63 Subpart CC (ARM 17.8.342 and 40 CFR 63 Subpart CC).

Q.18. CHS shall maintain records that CHS used submerged fill and internal floating roofs on the sour water storage tanks to document compliance with Section III.Q.10 (ARM 17.8.1213).

Q.19. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart GGGa (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).

Q.20. CHS shall maintain records showing monitored concentration levels of the organic compounds in the exhaust vent stream from the carbon adsorption system(s) in accordance with Section III.Q.11 and replaced the existing carbon with fresh carbon immediately when carbon breakthrough had been indicated (ARM 17.8.1213).

**Reporting**

Q.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).

Q.22. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of the records required by Section III.Q.18 and III.Q.20.

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

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

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

R. EU017 – Flare Systems

*Main Refinery Flare (replacement) and Coker Unit Flare*

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### Conditions

**R.1.** CHS shall comply with all applicable requirements of 40 CFR 63.670 for the Main Refinery Flare and the Coker Flare (ARM 17.8.342 and 40 CFR 63 subpart CC).

**R.2.** CHS shall not flare in the Main Refinery Flare any gas exceeding 162 ppmv H2S determined hourly on a 3-hour average basis. The combustion of process upset gases, as defined in 40 CFR 60 Subpart Ja, or fuel gas as defined in 40 CFR 60 Subpart Ja that is released to the flare as a result of relief valve leakage or other emergency malfunctions, is exempt from this limit (ARM 17.8.752).

**R.3.** CHS shall comply with all applicable requirements of 40 CFR 60 Subpart Ja as applicable to the Main Refinery Flare, including requirements for a flare management plan, root cause analysis program, flow monitoring, and total reduced sulfur or H2S monitoring (ARM 17.8.340 and 40 CFR 60 Subpart Ja). The flare management plan shall specifically discuss the operation and monitoring of the flare water seal and identify the associated backpressure it provides, and discuss maximizing use of the flare gas treatment and recovery system during planned maintenance events on the flare gas recovery system (ARM 17.8.749 and ARM 17.8.752).

**R.4.** CHS shall install and operate a Flare Gas Treatment and Recovery System which shall include three (3) GARO AB 1500 compressors or equivalent, and amine treatment capacity to ensure treatment of captured vent gases to meet NSPS Ja requirements (ARM 17.8.749, ARM 17.8.752).

**R.5.** CHS shall implement a Leak Detection and Repair (LDAR) program meeting 40 CFR 60 Subpart GGGa for all new components in VOC service installed as a part of the Replacement Main Refinery Flare project, including components added to recover and treat flare gas from the Zone E flare (Coker flare) system (ARM 17.8.752).

**R.6.** CHS shall not allow SO2 emissions from the Main Refinery 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 SO2 per 3-hour period (Board Order signed on June 12, 1998, and subsequent revisions of March 17, 2000; this requirement is “State Only”).

**R.7.** Total SO2 emissions from the Main Refinery Flare shall not exceed 150 pounds per 3-hour period (Federal Implementation Plan for the Billings/Laurel, MT, Sulfur Dioxide Area, April 21, 2008 and ARM 17.8.1212).

**R.8.** Except for minor flaring events, CHS shall minimize SO2 emissions from Main Refinery Flare flaring. In addition, when flaring of sulfur bearing gases occurs due to a malfunction,
CHS shall take immediate action to correct the malfunction (Board Order signed on June 12, 1998, and subsequent revisions of March 17, 2000; this requirement is “State Only”)

R.9. CHS shall comply with 40 CFR 60 Subpart Ja, as applicable to the Coker Flare, including the applicable design, equipment, work practice and operational standards of 40 CFR 60.103a (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

Compliance Demonstration

R.10. CHS shall comply with applicable monitoring requirements of 40 CFR 63.671 for the Main Refinery Flare and the Coker Flare (ARM 17.8.1213, ARM 17.8.342 and 40 CFR 63subpart CC).

R.11. CHS shall monitor compliance with the 162 ppmv H₂S flare gas limitation of Section III.R2 in accordance with the monitoring requirements provided in 40 CFR 60 Subpart Ja (ARM 17.8.1213, ARM 17.8.749). CHS shall comply with 40 CFR 60 Subpart Ja, including monitoring the emissions and operations of the Coker and Main Refinery Flare as required by 40 CFR 60 Subpart Ja, and all applicable monitoring, recordkeeping, and reporting requirements (ARM 17.8.1213, ARM 17.8.340 and 40 CFR 60 Subpart Ja).

R.12. As a compliance monitoring mechanism for Section III.R.5, CHS shall utilize the monitoring and recordkeeping requirements outlined in 40 CFR 60 Subpart VVa as required by 40 CFR 60 Subpart GGGa except where specifically exempted in 40 CFR 60 Subpart GGGa (ARM 17.8.1213 and ARM 17.8.749).

R.13. For purposes of determining whether a flaring event greater than 150 pounds of SO₂ per 3-hour period has occurred, CHS shall maintain records of all activities, other than de minimis activities, that result in SO₂ emissions from the flare (Board Order signed on June 12, 1998, and subsequent revisions of March 17, 2000; this requirement is “State Only”).

R.14. Compliance with the Main Refinery flare emission limit established by the April 21, 2008 FIP shall be determined by measuring the total sulfur concentration and volumetric flow rate of the gas stream to the flare (corrected to one (1) atmosphere pressure and 68 degrees F and using the methods contained in the flare monitoring plan required by 52.1392(h)(5). The volumetric flow rate of the gas stream to the flare shall be determined in accordance with the requirements of 52.1392(h)(2) and the total sulfur concentration of the gas stream to the flare shall be determined in accordance with 52.1392(h)(3) (73 FR 21417-21465, April 21, 2008 (April 21, 2008 FIP)) and ARM 17.8.1213).

R.15. For startup, shutdown and malfunction events at the Main Refinery flare that are in excess of the 150 lbs/3-hour emission limit, CHS shall follow the Affirmative Defense Provisions contained in the April 21, 2008, FIP for civil penalty relief (April 21, 2008 FIP and ARM 17.8.1213).

Recordkeeping

R.16. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).
R.17. CHS shall maintain a record of all flaring events. 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 Order signed on June 12, 1998, and subsequent revisions of March 17, 2000; this requirement is “State Only”).

R.18. CHS shall maintain records for the Main Refinery Flare as required by the April 21, 2008, FIP to demonstrate compliance with the FIP's recordkeeping requirements (April 21, 2008 and ARM 17.8.1212).

R.19. CHS shall comply with all recordkeeping requirements of 40 CFR 63 subpart CC for the refinery flares (ARM 17.8.342 and 40 CFR 63 subpart CC, ARM 17.8.1212).

R.20. CHS shall comply with the applicable recordkeeping requirements of 40 CFR 60 Subpart Ja as applicable to the Coker and Main Refinery Flare (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

R.21. CHS shall comply with the applicable recordkeeping requirements of 40 CFR 60 Subpart GGGa, including references within this rule to 40 CFR 63 Subpart VVa requirements (ARM 17.8.1212, ARM 17.8.340, and 40 CFR 60 Subpart GGGa).

Reporting

R.22. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

R.23. For flaring events in excess of 150 lbs/3-hr period, CHS shall comply with the reporting requirements identified in Section (3)(A)(5) of Exhibit A-1 of the Stipulation (Board Order signed on June 12, 1998, and subsequent revisions of March 17, 2000; this requirement is “State Only”).

R.24. CHS shall submit quarterly FIP reports as required by the April 21, 2008, FIP to EPA within 30 days of the end of each quarter. The quarterly reports shall contain the information required by the FIP and be certified for accuracy in writing by a responsible CHS official. The quarterly report shall consist of both a comprehensive electronic-magnetic report and a written hard copy data summary report (April 21, 2008 - FIP and ARM 17.8.1212).

R.25. CHS shall comply with the applicable reporting requirements of 40 CFR 60 Subpart Ja (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

R.26. CHS shall submit reports to the Department as outlined in the 40 CFR 63 Subpart VVa reporting requirements incorporated by reference into 40 CFR 60 Subpart GGGa (ARM 17.8.749).

R.27. CHS shall comply with the reporting requirements in 40 CFR 63 subpart CC for the refinery flares (ARM 17.8.342, 40 CFR 63 subpart CC and ARM 17.8.1212).

R.28. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).
R.29. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

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

c. A summary of compliance with the reporting requirements of 40 CFR 60 Subpart GGGa. This reporting requirement does not require the permittee to submit any report or compliance status determination earlier than is required by 40 CFR 60 Subpart GGGa;

d. A summary of compliance with Stipulation limits and dates that reports were submitted as required by Section III.R.18

e. A summary of compliance with the requirements of 40 CFR 63 subpart CC.

f. A summary of any changes made to flare stack height, compressor make, model, or capacity, amine treatment changes resulting in a reduction in amine treatment capacity, or statement that no changes were made.

g. A summary of any prompt deviation reports filed.

h. A summary of the dates that the required quarterly (FIP - April 2008) reports were submitted.

S. EU018 – RCRA Units

<table>
<thead>
<tr>
<th>Condition(s)</th>
<th>Pollutant/ Parameter</th>
<th>Permit Limit</th>
<th>Compliance Demonstration Method</th>
<th>Frequency</th>
<th>Reporting Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.1, S.2, S.3, S.4, S.5, S.6</td>
<td>Opacity</td>
<td>20%</td>
<td>Method 9</td>
<td>As Required by the Department and Section III.A.1</td>
<td>Semiannually</td>
</tr>
</tbody>
</table>

Conditions

S.1. CHS 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 (ARM 17.8.304(2)).
Compliance Demonstration

S.2. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.S.1 shall be determined using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

Recordkeeping

S.3. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

Reporting

S.4. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

S.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).

S.6. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits (ARM 17.8.1212).

T. EU019 – Cooling Towers

Cooling Tower #1, #2, #3, #5 and #6 (Coker Cooling Tower) and the 40 CFR 63 Subpart CC heat exchange systems associated with each cooling tower.

<table>
<thead>
<tr>
<th>Condition(s)</th>
<th>Pollutant/Parameter</th>
<th>Permit Limit</th>
<th>Compliance Demonstration Method</th>
<th>Frequency</th>
<th>Reporting Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>T.1, T.5, T.8, T.11, T.12, T.13</td>
<td>Opacity</td>
<td>40%</td>
<td>Method 9</td>
<td>As Required by the Department and Section III.A.1</td>
<td>Semiannually and Section III.A.2</td>
</tr>
<tr>
<td>T.2, T.5, T.8, T.11, T.12, T.13</td>
<td>Opacity</td>
<td>20%</td>
<td>Method 9</td>
<td>As Required by the Department and Section III.A.1</td>
<td>Semiannually and Section III.A.2</td>
</tr>
<tr>
<td>T.3, T.6, T.9, T.12, T.13</td>
<td>PM$_{10}$</td>
<td>PM$_{10}$ no more than 0.002% of circulating water flow</td>
<td>Certify</td>
<td>On-going</td>
<td>Semiannually</td>
</tr>
</tbody>
</table>

Conditions

T.1. CHS 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 (ARM 17.8.304(1)).

T.2. CHS 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 (ARM 17.8.304(2)).

T.3. CHS shall operate and maintain a mist eliminator on the Coker Cooling Tower (Cooling Tower #6) that limits PM$_{10}$ emissions to no more than 0.002% of circulating water flow (ARM 17.8.752).

T.4. CHS shall comply with 40 CFR 63 Subpart CC, as applicable to heat exchange systems. (ARM 17.8.342 and 40 CFR 63 Subpart CC).

**Compliance Demonstration**

T.5. As required by the Department and Section III.A.1, compliance with the opacity limitations listed in Section III.T.1 and T.2 shall be determined using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

T.6. Compliance with Section III.T.3 shall be monitored by operating and maintaining the mist eliminator as designed, as demonstrated through recordkeeping (ARM 17.8.1213).

T.7. CHS shall monitor the heat exchange systems as required by 40 CFR 63 Subpart CC, including 40 CFR 63.654 (ARM 17.8.342 and 40 CFR 63 Subpart CC).

**Recordkeeping**

T.8. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

T.9. CHS shall maintain records that the mist eliminator was designed to limit PM$_{10}$ emissions to no more than 0.002% of circulating water flow in order to document compliance with Section III.T.3 (ARM 17.8.1213).

T.10. CHS shall maintain records as required by 40 CFR 63 Subpart CC (ARM 17.8.342 and 40 CFR 63 Subpart CC).

**Reporting**

T.11. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

T.12. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

T.13. The semiannual monitoring report shall provide (ARM 17.8.1212):
a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. summary of results of any source testing that was performed during the reporting period; and

c. A summary of the records required by Section III.T.9 and III.T.10

d. A summary of compliance with 40 CFR 63 Subpart CC during the reporting period

U. EU020 – Saturate Gas Concentration Unit – combined with EU002

V. EU021 – ULSD Unit (900 Unit) and Hydrogen Plant (1000 Unit)

<table>
<thead>
<tr>
<th>Condition(s)</th>
<th>Pollutant/Parameter</th>
<th>Permit Limit</th>
<th>Compliance Demonstration Method</th>
<th>Frequency</th>
<th>Reporting Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>V.1, V.26, V.43, V.51, V.55, V.56</td>
<td>Opacity</td>
<td>20%</td>
<td>Method 9</td>
<td>As Required by the Department and Section III.A.1</td>
<td>Semiannually</td>
</tr>
<tr>
<td>V.6, V.30, V.48, V.54, V.55, V.56</td>
<td>ULSD Unit and Hydrogen Plant Piping and compressors in HAP Service</td>
<td>40 CFR 63 Subpart CC</td>
<td>40 CFR 60 Subpart VV</td>
<td>40 CFR 60 Subpart VV</td>
<td>Semiannually and 40 CFR 63 Subpart CC</td>
</tr>
<tr>
<td>Condition(s)</td>
<td>Pollutant/Parameter</td>
<td>Permit Limit</td>
<td>Compliance Method</td>
<td>Demonstration Frequency</td>
<td>Reporting Requirements</td>
</tr>
<tr>
<td>--------------</td>
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</tr>
<tr>
<td>V.8, V.32, V.50, V.55, V.56</td>
<td>Reactor Charge Heater (H-901), Fractionation Heater (H-902), and Hydrogen Reformer Heater (H-1001)</td>
<td>Fuel Oil shall not be fired in these units.</td>
<td>Recordkeeping</td>
<td>Monthly</td>
<td>Semiannually</td>
</tr>
<tr>
<td>V.9, V.33, V.55, V.56</td>
<td>SO₂ Emissions from Reactor Charge Heater (H-901)</td>
<td>1.96 tons/rolling 12-calendar month total and 0.90 lb/hr</td>
<td>RFG System H₂S CEMS, see Section B</td>
<td>On-going</td>
<td>Quarterly</td>
</tr>
<tr>
<td>V.10, V.35, V.36, V.38, V.43, V.51, V.52, V.55, V.56</td>
<td>NOₓ Emissions from Reactor Charge Heater (H-901)</td>
<td>2.86 tons/rolling 12-calendar month total and 0.65 lb/hr based on a 24-hour rolling average (recalculated hourly)</td>
<td>CEMS</td>
<td>On-going</td>
<td>Quarterly</td>
</tr>
<tr>
<td>V.11, V.35, V.36, V.42, V.43, V.51, V.55, V.56</td>
<td>CO Emissions from Reactor Charge Heater (H-901)</td>
<td>11.76 tons/rolling calendar month total</td>
<td>Use of Emissions Factors developed from Emissions Testing</td>
<td>On-going</td>
<td>Quarterly</td>
</tr>
<tr>
<td>V.12, V.34, V.55, V.56</td>
<td>VOC Emissions from Reactor Charge Heater (H-901)</td>
<td>0.77 tons/rolling 12-calendar month total</td>
<td>Emission Calculations</td>
<td>On-going</td>
<td>Quarterly</td>
</tr>
<tr>
<td>V.13, V.33, V.55, V.56</td>
<td>SO₂ Emissions from Fractionator Reboiler (H-902)</td>
<td>3.95 tons/rolling 12-calendar month total and 1.80 lb/hr</td>
<td>RFG System H₂S CEMS, see Section B</td>
<td>On-going</td>
<td></td>
</tr>
<tr>
<td>V.14, V.37, V.38, V.43, V.51, V.52, V.55, V.56</td>
<td>NOₓ Emissions from Fractionator Reboiler (H-902)</td>
<td>5.70 tons/rolling 12-calendar month total and 1.30 lb/hr based on a rolling 24-hour average (recalculated hourly)</td>
<td>CEMS</td>
<td>On-going</td>
<td></td>
</tr>
<tr>
<td>Condition(s)</td>
<td>Pollutant/Parameter</td>
<td>Permit Limit</td>
<td>Compliance Method</td>
<td>Demonstration Frequency</td>
<td>Reporting Requirements</td>
</tr>
<tr>
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</tr>
<tr>
<td>V.15, V.35, V.37, V.42, V.43, V.51, V.52, V.55, V.56</td>
<td>CO Emissions from Reactor Charge Heater (H-902)</td>
<td>11.76 tons/rolling calendar month total</td>
<td>Use of Emissions Factors developed from Emissions Testing</td>
<td>On-going</td>
<td></td>
</tr>
<tr>
<td>V.16, V.34, V.55, V.56</td>
<td>VOC Emissions from Fractionator Reboiler (H-902)</td>
<td>1.54 tons/rolling 12-calendar month total</td>
<td>Emission Calculations</td>
<td>On-going</td>
<td></td>
</tr>
<tr>
<td>V.17, V.39, V.55, V.56</td>
<td>Reformer Heater (H-1001)</td>
<td>ULNBs</td>
<td>Certify</td>
<td>Annual</td>
<td>Quarterly</td>
</tr>
<tr>
<td>V.18, V.32, V.55, V.56</td>
<td>Reformer Heater (H-1001)</td>
<td>burn all available PSA Tailgas</td>
<td>Recordkeeping</td>
<td>On-going</td>
<td></td>
</tr>
<tr>
<td>V.19, V.40, V.45, V.51, V.55, V.56</td>
<td>H₂S Emissions from Reformer Heater (H-1001)</td>
<td>60 ppmv</td>
<td>RFG System H₂S CEMS, see Section B</td>
<td>On-going</td>
<td></td>
</tr>
<tr>
<td>V.20, V.41, V.42, V.43, V.51, V.53, V.55, V.56</td>
<td>NOₓ Emissions from Reformer Heater (H-1001)</td>
<td>40 ppmv/30-day rolling</td>
<td>Method 7/CEMS</td>
<td>Every Three Years/On-going</td>
<td></td>
</tr>
<tr>
<td>V.21, V.22, V.41, V.42, V.43, V.51, V.53, V.55, V.56</td>
<td>NOₓ Emissions from Reformer Heater (H-1001)</td>
<td>29.4 tons/rolling 12-calendar month total</td>
<td>Method 7/CEMS</td>
<td>Every Three Years/On-going</td>
<td></td>
</tr>
<tr>
<td>V.21, V.22, V.41, V.42, V.43, V.51, V.53, V.55, V.56</td>
<td>NOₓ Emissions from Reformer Heater (H-1001)</td>
<td>7.7 lb/hr based on a rolling 24-hour average</td>
<td>CEMS</td>
<td>On-going</td>
<td></td>
</tr>
<tr>
<td>V.23, V.24, V.42, V.43, V.51, V.53, V.55, V.56</td>
<td>CO Emissions from Reformer Heater (H-1001)</td>
<td>16.8 tons/rolling 12-calendar month total</td>
<td>Method 10</td>
<td>Every Three Years</td>
<td>Quarterly</td>
</tr>
<tr>
<td>V.23, V.24, V.42, V.43, V.51, V.53, V.55, V.56</td>
<td>CO Emissions from Reformer Heater (H-1001)</td>
<td>7.7 lb/hr based on a 24-hour rolling average during startup and shutdown</td>
<td>CEMS</td>
<td>On-going</td>
<td></td>
</tr>
</tbody>
</table>
Conditions

V.1. CHS 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 (ARM 17.8.304(2)).

V.2. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart J – Standards of Performance for Petroleum Refineries. This regulation shall apply to the two ULSD Unit Heaters (H-901 and H-902) for the RFG requirements in Section III.B, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart J).

V.3. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart Ja – Standards of Performance for Petroleum Refineries. This regulation shall apply to the Reformer heater (H-1001) (ARM 17.8.340 and 40 CFR 60 Subpart Ja).


V.5. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart QQQ – Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems. This regulation shall apply to the ULSD Unit and Hydrogen Plant process drains and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

V.6. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart CC, NESHAPs From Petroleum Refineries, including compliance with specific requirements in Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart VV applies to the various pumps, valves, flanges, and other equipment in organic HAP service (ARM 17.8.342 and 40 CFR 63 Subpart CC).

V.7. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

V.9. CHS shall not cause or authorize total SO\textsubscript{2} emissions from the Reactor Charge Heater (H-901) to exceed the limits of 1.96 tons/rolling 12-month total and 0.90 lb/hr (ARM 17.8.752).

V.10. CHS shall not cause or authorize total NO\textsubscript{X} emissions from the Reactor Charge Heater (H-901) to exceed the limits of 2.86 tons/rolling 12-calendar month total and 0.65 lb/hr based on a 24-hour rolling average (recalculated hourly) (ARM 17.8.752).

V.11. CHS shall not cause or authorize total CO emissions from the Reactor Charge Heater (H-901) to exceed the limits of 11.76 tons/rolling 12-calendar month (ARM 17.8.752).

V.12. CHS shall not cause or authorize total VOC emissions from the Reactor Charge Heater (H-901) to exceed the limit of 0.77 tons/rolling 12-calendar month total (ARM 17.8.752).

V.13. CHS shall not cause or authorize total SO\textsubscript{2} emissions from the Fractionator Reboiler (H-902) to exceed the limits of 3.95 tons/rolling 12-calendar month total and 1.80 lb/hr (ARM 17.8.752).

V.14. CHS shall not cause or authorize total NO\textsubscript{X} emissions from the Fractionator Reboiler (H-902) to exceed the limits of 5.70 tons/rolling 12-calendar month total and 1.30 lb/hr based on a rolling 24-hour average (recalculated hourly) (ARM 17.8.752).

V.15. CHS shall not cause or authorize total CO emissions from the Fractionator Reboiler (H-902) to exceed the limits of 11.01 tons/rolling 12-calendar month total (ARM 17.8.752).

V.16. CHS shall not cause or authorize total VOC emissions from the Fractionator Reboiler (H-902) to exceed the limit of 1.54 tons/rolling 12-calendar month total (ARM 17.8.752).

V.17. The H-1001 Reformer Heater shall be equipped with ULNBs (ARM 17.8.752).

V.18. All available 1000 Unit PSA purge gas (sulfur free) shall be fired in the H-1001 Reformer Heater except during periods of startup, shutdown, operational transition, or process upset (ARM 17.8.752).

V.19. CHS shall not burn in the H-1001 Reformer Heater any fuel gas that contains H\textsubscript{2}S in excess of 60 ppmv determined daily on a 365-successive calendar day rolling average basis (ARM 17.8.752, ARM 17.8.340, and 40 CFR 60 Subpart Ja).

V.20. CHS shall not cause or authorize NO\textsubscript{X} emissions from the Reformer Heater (H-1001) to exceed 40 ppmv (dry basis, corrected to 0 percent excess air) based on a 30-day rolling average (40 CFR 60 Subpart Ja).

V.21. CHS shall not cause or authorize NO\textsubscript{X} emissions from the Reformer Heater (H-1001) to exceed 29.4 tons per rolling 12-calendar month total (ARM 17.8.752).

V.22. FCHS shall not cause or authorize NO\textsubscript{X} emissions from the Reformer Heater (H-1001) to exceed 7.7 lb/hr based on a rolling 24-hour average (ARM 17.8.752).
V.23. CHS shall not cause or authorize CO emissions from the Reformer Heater (H-1001) to exceed 16.8 tons per rolling 12-calendar month (ARM 17.8.752).

V.24. CHS shall not cause or authorize CO emissions from the Reformer Heater (H-1001) to exceed 7.7 lb/hr during periods of startup and shutdown, based on a 24-hour rolling average (ARM 17.8.752).

V.25. CO, VOC and PM/PM$_{10}$ emissions from the H-1001 Reformer Heater shall be controlled by proper design and good combustion practices (ARM 17.8.752).

**Compliance Demonstration**

V.26. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.V.1 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

V.27. CHS shall meet all applicable requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart J, Standards of Performance for Petroleum Refineries (ARM 17.8.340 and 40 CFR 60 Subpart J).

V.28. CHS shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart Ja, Standards of Performance for Petroleum Refineries. These regulations shall apply to the Reformer Heater (H-1001) and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

V.29. CHS shall meet the requirements of all 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. These regulations shall apply to the ULSD Unit and Hydrogen Plant and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

V.30. CHS shall institute a monitoring and maintenance program in accordance with 40 CFR 60 Subpart GGG and 40 CFR 63 Subpart CC (ARM 17.8.340 and 40 CFR 60 Subpart GGG; and ARM 17.8.342 and 40 CFR 63 Subpart CC).

V.31. CHS shall demonstrate compliance with 40 CFR 63 Subpart DDDDDD as required by Subpart DDDDDD including maintaining on-site an annual report containing the information required in 40 CFR 63.7540 (ARM 17.8.342 and 40 CFR 63 Subpart DDDDDD).

V.32. Compliance with Section III.V.8 shall be monitored by recordkeeping of fuel type fired in H-901, H-902 or H-1001 (ARM 17.8.1213).

V.33. CHS shall monitor compliance with the SO$_2$ limits for the Reactor Charge Heater (H-901) and Fractionator Reboiler (H-902) listed in Sections III.V.9 and III.V.13 through monitoring the volume and H$_2$S concentration of refinery fuel gas combusted, as specified in Section III.B (ARM 17.8.1213).

V.34. CHS shall monitor compliance with the VOC limit for the Reactor Charge Heater (H-901) and Fractionator Reboiler (H-902) listed in Sections III.V.12 and III.V.16 through
maintaining records of the fuel gas consumed and using an appropriate emissions factor as approved by the Department (ARM 17.8.1213).

V.35. Compliance with the H-901 and H-902 NO$_x$ emission limits shall be determined using the NO$_x$ CEMS and the volumetric stack flow rate monitor (with appropriate moisture correction, determined from the annual stack test data (RATA)). Compliance with the H-901 and H-902 CO emission limits shall be determined from emissions factors generated from the most recent CO stack test (CO testing, concurrent with NO$_x$ testing) (ARM 17.8.749).

V.36. The Reactor Charge Heater (H-901) shall be tested once every three years, or according to another testing/monitoring schedule as may be approved by the Department, for NO$_x$ and CO, concurrently (using Methods 7 and 10, respectively, in accordance with Section III.A.2 (ARM 17.8.106)), and the results submitted to the Department in order to monitor compliance with the NO$_x$ and CO emission limits contained in Sections III.V.10 and III.V.11 (ARM 17.8.105 and ARM 17.8.749).

V.37. The Fractionator Heater (H-902) shall be tested once every three years, or according to another testing/monitoring schedule as may be approved by the Department, for NO$_x$ and CO, concurrently (using Methods 7 and 10, respectively, in accordance with Section III.A.2 (ARM 17.8.106)), and the results submitted to the Department in order to monitor compliance with the NO$_x$ and CO emission limits contained in Section III.V.14 and III.V.15 (ARM 17.8.105 and ARM 17.8.749).

V.38. In addition to stack testing required in Section III.V.36 and III.V.37 above, compliance determinations for the NO$_x$ limit for H-901 and H-902 shall also be based upon monitoring data as required below (ARM 17.8.749):

CHS shall install and operate the following CEMS/CERMS for the Reactor Charge Heater H-901 and the Fractionator Reboiler H-902.

a. NO$_x$/O$_2$

b. Volumetric flowrate monitor

CEMS/CERMS shall comply with Appendix B of 40 CFR 60, Performance Specifications 2, 3, and 6; and Appendix F of 40 CFR 60. The required volumetric flow rate monitor shall comply with the Billings/Laurel SIP Pollution Control Plan Exhibit A, Attachment 1 Methods A-1 and B-1. These requirements are referenced and considered applicable to these monitors based on ARM 17.8.749.

All CEMS 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 CEMS is unable to meet minimum availability requirements, the recipient shall provide a back-up or alternative monitoring system and plan such that continuous compliance can be demonstrated.

V.39. CHS shall demonstrate compliance with Section III.V.17 by ensuring that the Reformer Heater (H-1001) operates with ULNB technology (ARM 17.8.1213).
V.40. Compliance monitoring for the H₂S limit in Section III.V.19 shall be based upon continuous H₂S concentration monitor data and fuel gas flowmeter data as required in Section III.A.34 (ARM 17.8.1213).

V.41. The Reformer Heater (H-1001) shall be tested once every three years, or according to another testing/monitoring schedule as may be approved by the Department, for NOₓ and CO, concurrently, and the results submitted to the Department in order to demonstrate compliance with the NOₓ and CO emission limits contained in Sections III.V.20, III.V.21, III.V.22, III.V.23, III.V.24 (ARM 17.8.105 and ARM 17.8.749).

V.42. CHS shall operate and maintain the following CEMS/CERMS on the H-1001 stack:

a. NOₓ/O₂ (40 CFR 60 Subpart Ja)
b. CO (ARM 17.8.1213)
c. Volumetric flow rate monitor

In addition to stack testing requirement listed in III.V.41, compliance with the NOₓ and CO emission limitations for H-1001 contained in Sections III.V.20, III.V.21, III.V.22, III.V.23, and III.V.24 shall be determined using data from the CEMS (ARM 17.8.1213 and 40 CFR 60 Subpart Ja).

CEMS/CERMS shall comply with all applicable provisions of 40 CFR 60.5 through 60.13, 40 CFR 60 Subpart Ja, 60.100a-108a, and Appendix B, Performance Specifications 2, 3, 4 or 4A, and Appendix F. The required volumetric flow rate monitor shall comply with the Billings/Laurel SIP Pollution Control Plan Exhibit A, Attachment 1 Methods A-1 and B-1 (ARM 17.8.1213).

All CEMS 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 CEMS is unable to meet minimum availability requirements, CHS shall provide a back-up or alternative monitoring system and plan such that continuous compliance can be demonstrated.

Recordkeeping

V.43. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

V.44. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart J (ARM 17.8.340 and 40 CFR 60 Subpart J).

V.45. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart Ja (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

V.46. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart GGG (ARM 17.8.340 and 40 CFR 60 Subpart GGG).
V.47. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart QQQ (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

V.48. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 63 Subpart CC (ARM 17.8.342 and 40 CFR 63 Subpart CC).

V.49. CHS shall maintain records as required by 40 CFR 63 Subpart DDDDD (ARM 17.8.342, 40 CFR 63 Subpart DDDDD, and ARM 17.8.1212).

V.50. CHS shall maintain records of the fuel type fired in H-901, H-902 and H-1001 (ARM 17.8.1213).

**Reporting**

V.51. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

V.52. For the H-901 and H-902, CHS shall submit quarterly emission reports to the Department based on data from the installed CEMS/CERMS. Emission reporting for NO\textsubscript{X} from the emission monitors shall consist of the maximum 24-hour rolling average (determined hourly) for each calendar day. CHS shall submit the quarterly emission reports within 30 days of the end of each calendar quarter. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or uploaded to the State of Montana’s File Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient or equivalent service. The quarterly report shall also include the following (ARM 17.8.749):

a. Monitoring downtime that occurred during the reporting period.

b. A summary of excess emissions or applicable concentrations for each pollutant and the averaging period identified in Sections III.V.10 and III.V.14. Excess emissions shall be calculated in the same fashion as required by 40 CFR Part 60.

c. Compliance determinations for hourly and annual limits specifically allowed in Sections III.V.10 and III.V.14. Calculations shall utilize all valid data.

d. Reasons for any emissions in excess of those specifically allowed in Sections III.V.10 and III.V.14 with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

V.53. For the H-1001, CHS shall submit quarterly emission reports to the Department based on data from the installed CEMS/CERMS. Emission reporting for NO\textsubscript{X} and CO from the emission monitors shall consist of a daily maximum 1-hour average (ppm) for each calendar day. CHS shall submit the quarterly emission reports within 30 days of the end of each calendar quarter. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or uploaded to the State of Montana’s File Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient or equivalent service. The quarterly report shall also include the following (ARM 17.8.749, ARM 17.8.1213):
a. The daily and monthly NOX averages in ppm, corrected to 0% O2.

b. Monitoring downtime that occurred during the reporting period.

c. A summary of excess emissions or applicable concentrations for each pollutant and the averaging period identified in Sections III.V.20, III.V.21, III.V.22, III.V.23, and III.V.24.

d. Compliance determinations for hourly, 30-day, and annual limits specifically allowed in Sections III.V.20, III.V.21, III.V.22, III.V.23, and III.V.24 (ARM 17.8.749).

e. Reasons for any emissions in excess of those specifically allowed in Sections III. III.V.20, III.V.21, III.V.22, III.V.23, and III.V.24, with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

V.54. CHS shall comply with applicable reporting requirements of applicable NSPS and MACT standards, including 40 CFR 60 Subpart GGG, 40 CFR 60 Subpart QQQ, 40 CFR 63 Subpart CC, 40 CFR 63 Subpart DDDDD, 40 CFR 60 Subpart J, and 40 CFR 60 Subpart Ja (ARM 17.8.1212).

V.55. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

V.56. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. A summary of the records required by Section III.V.32;

c. Emissions reports for SO2 and VOC emissions from the H-901, H-902, and H-1001. The reports shall include:

i. a summary of any excess emissions

ii. reasons for any excess emissions with mitigative measures utilized and corrective action taken to prevent recurrence, and

iii. compliance determinations with associated limits.

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

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

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

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

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

j. A summary of compliance with unit emission limits and conditions of this section and dates that quarterly reports were submitted as required.

W. EU022 – Delayed Coker Unit

*Coker Charge Heater (H-7501), Coke Processing Operations, C-7601 Compressor, Coke Drum Steam Vent*

<table>
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<tr>
<th>Condition(s)</th>
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<th>Compliance Demonstration Method</th>
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<tbody>
<tr>
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<td>Opacity</td>
<td>20%</td>
<td>Method 9</td>
<td>As Required by the Department and Section III.A.1</td>
<td>Semiannually</td>
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<td>Condition(s)</td>
<td>Pollutant/Parameter</td>
<td>Permit Limit</td>
<td>Compliance Demonstration Method</td>
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<tr>
<td>W.6, W.18, W.33, W.38, W.39</td>
<td>Coker Charge Heater (H-7501)</td>
<td>Fuel Oil will not be fired in this unit.</td>
<td>Certify</td>
<td>Semiannually</td>
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<tr>
<td>W.7, W.22, W.37, W.38, W.39</td>
<td>SO₂ Emissions from Coker Charge Heater (H-7501)</td>
<td>6.61 tons/rolling 12-calendar month total and 3.02 lb/hr</td>
<td>RFG System H₂S CEMS, see Section B</td>
<td>On-going Quarterly</td>
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<tr>
<td>W.8, W.19, W.28, W.36, W.37, W.38, W.39</td>
<td>NOₓ Emissions from Coker Charge Heater (H-7501)</td>
<td>28.2 tons/rolling 12-calendar month total and 6.44 lb/hr</td>
<td>Method 7</td>
<td>Every Three Years</td>
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<tr>
<td>W.9, W.10, W.19, W.20, W.21, W.28, W.36, W.37, W.38, W.39</td>
<td>CO Emissions from Coker Charge Heater (H-7501)</td>
<td>35.2 tons/rolling 12-calendar month total, 8.05 lb/hr, and 400 ppmvd at 3% O₂/30-day rolling average. During startup, shutdown, and spalling – 16.1 lb/hr rolling 24-hour average</td>
<td>Method 10</td>
<td>Every Three Years</td>
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<tr>
<td>W.11, W.23, W.37, W.38, W.39</td>
<td>VOC Emissions from Coker Charge Heater (H-7501)</td>
<td>1.41 tons/rolling 12-calendar month total</td>
<td>Emission Calculations, see Section B</td>
<td>On-going</td>
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<tr>
<td>W.12, W.24, W.34, W.37, W.38, W.39</td>
<td>Coke Processing Operations Handling Requirements</td>
<td>Certify</td>
<td>Semiannually</td>
<td>Semiannually</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>PM₁₀ emissions 4.52 tons/yr (monthly rolling 12-month total)</td>
<td>Equation</td>
<td>Annually</td>
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<td>Condition(s)</td>
<td>Pollutant/ Parameter</td>
<td>Permit Limit</td>
<td>Compliance Demonstration Method</td>
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<td>Reporting Requirements</td>
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<tr>
<td></td>
<td></td>
<td>The vessel shall not be opened to atmosphere until either the pressure or temperature condition is satisfied</td>
<td>Monitor and Calculate</td>
<td>On-going</td>
<td>Quarterly</td>
</tr>
</tbody>
</table>

**Conditions**

W.1. CHS 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 (ARM 17.8.304(2)).


W.3. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart QQQ – Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems. This regulation shall apply to the Delayed Coker Unit process drains and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

W.4. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart CC, NESHAPs From Petroleum Refineries, including compliance with specific requirements in Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. Subpart CC applies to the various pumps, valves, flanges, and other equipment in organic HAP service. CHS shall also comply with the Subpart CC delayed coker unit decoking operation standards (ARM 17.8.342 and 40 CFR 63 Subpart CC).

W.5. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart DDDDD (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).


W.7. CHS shall not cause or authorize total SO₂ emissions from the Coker Charge Heater (H-7501) to exceed the limits of 6.61 tons/rolling 12-month total or 3.02 lb/hr (ARM 17.8.752).
W.8. CHS shall not cause or authorize total NOx emissions from the Coker Charge Heater (H-7501) to exceed the limits of 28.2 tons/rolling 12-month total or 6.44 lb/hr (ARM 17.8.752).

W.9. CHS shall not cause or authorize total CO emissions from the Coker Charge Heater (H-7501) to exceed the limits of 35.2 tons/rolling 12-month total, 8.05 lb/hr, or 400 ppmvd at 3% O₂ on a 30-day rolling average (ARM 17.8.752).

W.10. CHS shall not cause or authorize during periods of startup, shutdown and spalling (a feed heater coil decoking process completed during operation to avoid complete unit shutdown) CO emissions from Coker Charge Heater (H-7501) to exceed 16.1 lb/hr on a 24-hour rolling average (ARM 17.8.752).

W.11. CHS shall not cause or authorize total VOC emissions from the Coker Charge Heater (H-7501) to exceed the limit of 1.41 tons/rolling 12-month total (ARM 17.8.752).

W.12. CHS will meet the following requirements for the coke processing operations:

a. CHS shall store onsite coke in the walled enclosure for coke storage only. Onsite coke storage shall be limited to a volume that is contained within the walled enclosure. Storage of coke outside of the walled enclosure is prohibited (ARM 17.8.752).

b. The coke pile shall not exceed the height of the enclosure walls adjacent to the pile at any time (ARM 17.8.752).

c. CHS shall not cause or authorize emissions to be discharged into the atmosphere from coke handling without taking reasonable precautions to control emissions of airborne particulate matter. CHS shall wet the coke as needed to comply with the reasonable precautions standard (ARM 17.8.308 and ARM 17.8.752).

d. CHS shall install and maintain enclosures surrounding the coke conveyors, coke transfer drop points (not including the location at which coke is transferred from the front-end loader to the initial coke sizing screen), and crusher (ARM 17.8.752).

e. CHS shall install and maintain a telescoping loading spout for loading coke into railcars and trucks (ARM 17.8.752).

f. Alternate Coke Handling Method: In the event the conveyors are inoperable (as described in Section III.W.10.d and c) due to either planned or unplanned maintenance activities, CHS may transport uncrushed coke only from the coke storage area to the railcar using a front-end loader. The requirements specified in Section III.W.12a-c still apply. The alternate coke handling method is limited to 24 batches per year (ARM 17.8.752).

g. CHS 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. CHS shall treat unpaved coke trucking transport roads with water and/or chemical dust suppressant as necessary to control emissions while coke is being transported from the refinery (ARM 17.8.308 and ARM 17.8.752).
h. CHS shall cover the coke during truck transport of the coke from the refinery (ARM 17.8.752).

i. CHS shall load no more than 175,200 tons of coke into trucks per year, as determined monthly on a rolling 12-month period (ARM 17.8.749).

j. CHS shall clean the paved sections of coke transport roads, as necessary, for reasonable precautions specific to truck hauling of coke on refinery property (ARM 17.8.308 and ARM 17.8.752).

W.13. CHS will meet the following requirements for the Coke Drum Steam Vent:

   a. VOC emissions from the Coke Drum Steam Vent shall not exceed 18.10 tons/yr as determined on a monthly rolling 12-month total (ARM 17.8.749).

   b. PM$_{10}$ emissions from the Coke Drum Steam Vent shall not exceed 4.52 tons/yr as determined on a monthly rolling 12-month total (ARM 17.8.749).

   c. CHS shall de-pressure each coke drum to a closed blowdown system until either: (ARM 17.8.342, ARM 178.749 and 40 CFR 63 subpart CC)

      i. The coke drum average pressure is 2 psig or less, determined on a rolling 60-event average or
      ii. The coke drum average vessel temperature of 220 degrees Farhenheit or less determined on a rolling 60-event average.

Compliance Demonstration

W.14. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.W.1 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

W.15. CHS shall institute a monitoring and maintenance program in accordance with 40 CFR 60 Subpart GGG and 40 CFR 63 Subpart CC (ARM 17.8.340 and 40 CFR 60 Subpart GGG; and ARM 17.8.342 and 40 CFR 63 Subpart CC).

W.16. CHS shall meet the requirements of all 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. These regulations shall apply to the Coker Charge Heater and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

W.17. CHS shall demonstrate compliance with 40 CFR 63 Subpart DDDDD as required by Subpart DDDDDD including maintaining on-site an annual report containing the information required in 40 CFR 63.7540 (ARM 17.8.342 and 40 CFR 63 Subpart DDDDD).

W.18. Compliance with Section III.W.6 shall be monitored by not firing fuel oil in the Coker Charge Heater (H-7501) as demonstrated through recordkeeping (ARM 17.8.1213).
W.19. The Coker Charge Heater (H-7501) shall be tested once every three years, or according to another testing/monitoring schedule as may be approved by the Department, for NOX and CO, concurrently (using Methods 7 and 10, respectively, in accordance with Section III.A.2 (ARM 17.8.106)), and the results submitted to the Department in order to monitor compliance with the NOX and CO emission limits contained in Section III.W.8 and III.W.9 (ARM 17.8.105 and ARM 17.8.749).

W.20. CHS shall operate and maintain the following CEMS/CERMS on the H-7501 stack:
   a. O₂ (ARM 17.8.1213)
   b. CO (ARM 17.8.1213)

   In addition to stack testing required under Section III.W.19, compliance with the CO emission limitations contained in Section III.W.10 shall be determined using data from the CEMS.

W.21. CEMS/CERMS required by this permit shall comply with all applicable provisions of 40 CFR 60.5 through 60.13, Subparts J, 60.100-108, and Appendix B, Performance Specifications 2, 3, 4 or 4A, and Appendix F (ARM 17.8.1213).

W.22. CHS shall monitor compliance with the SO₂ limits for the Coker Charge Heater listed in Section III.W.7 through monitoring the volume and H₂S concentration of refinery fuel gas combusted, as specified in Section III.B (ARM 17.8.1213).

W.23. CHS shall monitor compliance with the VOC limit for the Coker Charge Heater listed in Section III.W.11 through maintaining records of the fuel gas consumed and using the emission factor as specified in Section III.B (ARM 17.8.1213).

W.24. Compliance with Section III.W.12 shall be monitored by following the requirements for the coke processing operations (ARM 17.8.749).

W.25. CHS shall install, operate, calibrate and maintain a monitoring system to determine the coke drum vessel pressure (ARM 17.8.749, ARM 17.8.342 and 40 CFR 63 subpart CC).

W.26. Using the following equations, CHS shall determine the VOC and PM₁₀ emissions from the Coke Drum Steam Vent each time a steam vent is opened to the atmosphere (cycle). CHS shall sum emissions from all cycles on a rolling 12-month basis to determine compliance with the emissions limits (ARM 17.8.749).

\[
PM_{10,\text{lb/cycle}} = \left(\frac{15}{2} \sqrt[4]{\frac{65}{4}}\right)\left(-1.5041P^2 + 17.603P + 3.7022\right)
\]

\[
VOC,\text{lb/cycle} = \left(\frac{15}{2} \sqrt[4]{\frac{65}{4}}\right)\left(2.6378P^3 - 33.487P^2 + 144.5P - 37.706\right)
\]

\[P = 5\text{-minute rolling average coke drum pressure (psig) as determined just prior to initiating steps to isolate the coke drum prior to venting, draining or deheading.}\]
W.27. Compliance with the limit in condition W.13.c shall be determined based on the 5-minute rolling average pressure or temperature calculated as described in 40 CFR 63 subpart CC (ARM 17.8.749, ARM 17.8.342 and 40 CFR 63 subpart CC).

Recordkeeping

W.28. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

W.29. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart GGG (ARM 17.8.340 and 40 CFR 60 Subpart GGG).

W.30. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart QQQ (ARM 17.8.340 and 40 CFR 60 Subpart QQQ).

W.31. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 63 Subpart CC (ARM 17.8.342 and 40 CFR 63, Subpart CC).

W.32. CHS shall maintain records as required by 40 CFR 63 Subpart DDDDD (ARM 17.8.342, 40 CFR 63 Subpart DDDDD, and ARM 17.8.1212).

W.33. CHS shall maintain records of fuel type fired in H-7501 to document compliance with Section III.W.6 (ARM 17.8.1213).

W.34. CHS shall maintain, under CHS's control, records of compliance with the coke processing requirements, to monitor compliance with Section III.W.12 (ARM 17.8.1213).

W.35. CHS shall maintain records of compliance with the coke drum steam vent requirements as required in Section III.W.25 and III.W.26 (ARM 17.8.1213).

Reporting

W.36. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

W.37. CHS shall submit the quarterly emission reports within 30 days of the end of each reporting period. CHS shall submit the quarterly emission reports within 30 days of the end of each calendar quarter. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or uploaded to the State of Montana’s File Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service). The report shall include the following (ARM 17.8.749, ARM 17.8.340 and 40 CFR 60 Subpart J):

a. Source or unit operating time during the reporting period;

b. Quarterly fuel gas consumption rates;

c. Monitoring downtime that occurred during the reporting period;
d. A summary of excess emissions or applicable concentrations for each pollutant and the averaging period identified in Section III.W.7, III.W.8, III.W.9, III.W.10 and III.W.11;

e. Compliance determinations for hourly, 24-hour and annual limits specifically allowed in Section III.W.7, III.W.8, III.W.9, III.W.10 and III.W.11 (ARM 17.8.749);

f. Reasons for any emissions in excess of those specifically allowed in Section III.W.7, III.W.8, III.W.9, III.W.10 and III.W.11 with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation;

g. A summary of the number of batches of coke that were processed using the alternative coke handling method (ARM 17.8.749); and

h. VOC and PM$_{10}$ emissions from the coke drum steam vent reported as tons/rolling 12-month total (ARM 17.8.749).

i. The rolling 12 month total tons of coke transported by truck (ARM 17.8.1212).

W.38. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

W.39. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. A summary of records required by Section III.W.33

c. Dates that quarterly reports were submitted as required by Section III.W.37

d. Records required by Section III.W.34 and III.W.35;

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

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

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

i. A summary of compliance with unit emission limits and conditions of this section and dates that quarterly reports were submitted as required by Section III.W.36.

### X. EU023 – Zone E SRU/TGTU/TGI

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<th>Compliance Demonstration Method</th>
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<td>X.3, X.12, X.16, X.17, X.20, X.24, X.25, X.26, X.27</td>
<td>SO₂</td>
<td>49.4 Tons per Rolling 12-Calendar Month Total, and 14.1 lb/hr</td>
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<td>X.4, X.12, X.16, X.17, X.20, X.24, X.25, X.26, X.27</td>
<td>SO₂</td>
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<td>X.5, X.12, X.16, X.17, X.20, X.24, X.25, X.26, X.27</td>
<td>SO₂</td>
<td>200 ppm on a rolling 12-month average corrected to 0% O2 on a dry basis from the TGTU on the Coker Unit</td>
<td>CEMS</td>
<td>On-going</td>
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<td>X.6, X.13, X.20, X.24, X.25, X.26, X.27</td>
<td>NOₓ</td>
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<td>X.7, X.14, X.23, X.26, X.27</td>
<td>No fuel oil</td>
<td>Fuel Oil Cannot Be Fired in This Unit</td>
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<td>X.8, X.18, X.20, X.24, X.26, X.27</td>
<td>PM</td>
<td>0.10 gr/dscf corrected to 12% CO₂</td>
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<td>Permit Limit</td>
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<td>As required by the Department and Section III.A.1</td>
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</table>

**Conditions**

X.1. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart J—Standards of Performance for Petroleum Refineries. These regulations shall apply to the Zone E SRU Incinerator Stack and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60 Subpart J).

X.2. CHS shall comply with all applicable requirements of 40 CFR 63 Subpart UUU NESHAPs for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units, (Refinery MACT II). These regulations shall apply to the Zone E SRU/TGTU/TGI Stack and any other equipment, as appropriate (ARM 17.8.342 and 40 CFR 63 Subpart UUU).

X.3. SO₂ emissions from the Zone E SRU/TGTU/TGI shall not exceed 49.4 tons per rolling 12-calendar month total, and 14.1 lb/hr (ARM 17.8.752).

X.4. SO₂ emissions from the Zone E SRU/TGTU/TGI shall not exceed 250 ppm, rolling 12-hour average corrected to 0% O₂ on a dry basis (ARM 17.8.752).

X.5. CHS shall operate and maintain the TGTU on the Coker Unit to limit SO₂ emissions from the Coker Unit stack to no more than 200 ppm on a rolling 12-month average corrected to 0% O₂ on a dry basis (ARM 17.8.752).

X.6. NOₓ emissions from the Zone E SRU/TGTU/TGI shall not exceed 4.62 tons per rolling 12-calendar month total, and 1.05 lb/hr (ARM 17.8.749).

X.7. CHS shall not fire fuel oil in this unit (ARM 17.8.749).

X.8. CHS shall not cause or authorize to be discharged into the atmosphere from the Zone E SRU/TGTU/TGI any PM emissions in excess of 0.10 gr/dscf corrected to 12% CO₂ (ARM 17.8.752).

X.9. CHS shall not cause or authorize to be discharged into the atmosphere from the Zone E SRU/TGTU/TGI any visible emissions that exhibit an opacity of 10% or greater (ARM 17.8.752).

**Compliance Demonstration**

X.10. CHS shall meet the requirements of all testing and procedures of ARM 17.8.340, which references 40 CFR 60 Subpart - Standards of Performance for Petroleum Refineries (ARM 17.8.340 and 40 CFR 60 Subpart J).
X.11. CHS shall meet the requirements of all testing and procedures of ARM 17.8.342, which references 40 CFR 63 Subpart UUU NESHAPs for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units (Refinery MACT II) (ARM 17.8.342 and 40 CFR 63 Subpart UUU).

X.12. The Zone E SRU/TGTU/TGI stack shall be tested once every three years for SO\textsubscript{2}, or according to another testing/monitoring schedule as may be approved by the Department (using Methods 6/6c, in accordance with ARM 17.8.106), and the results submitted to the Department in order to monitor compliance with the SO\textsubscript{2} emission limits contained in Section III.X.3, III.X.4, III.X.5 (ARM 17.8.105 and ARM 17.8.749).

X.13. The Zone E SRU/TGTU/TGI stack shall be tested on a 6-year basis for NO\textsubscript{x}, or according to another testing/monitoring schedule as may be approved by the Department (using Method 7, in accordance with ARM 17.8.106), and the results submitted to the Department in order to monitor compliance with the NO\textsubscript{x} emission limits contained in Section III.X.6 (ARM 17.8.105 and ARM 17.8.749).

X.14. Compliance with Section III.X.7 shall be monitored by not firing fuel oil in this unit (ARM 17.8.1213).

X.15. CHS shall monitor compliance with Section III.X.8 by conducting a Method 5 stack test, as required by the Department (ARM 17.8.1213).

X.16. CHS shall operate and maintain the following CEMS/CERMS on the Zone E SRU/TGTU/TGI stack:

a. SO\textsubscript{2} (40 CFR 60 Subpart J)

b. O\textsubscript{2} (40 CFR 60 Subpart J)

c. Volumetric Flow Rate (ARM 17.8.749)

In addition to stack testing required under Section III.X.12, compliance with the SO\textsubscript{2} emission limitations contained in Sections III.X.3, III.X.4, and III.X.5 shall be determined using data from the CEMS/CERMS.

X.17. CEMS/CERMS required by this permit shall comply with all applicable provisions of 40 CFR 60.5 through 60.13, Subparts J, 60.100-108, and Appendix B, Performance Specifications 2, 3, 4 or 4A, and Appendix F. The volumetric flow rate monitor shall comply with the Billings/Laurel SIP Pollution Control Plan Exhibit A, Attachment 1 Methods A-1 and B-1 (ARM 17.8.1213).

X.18. As required by the Department and Section III.A.1, compliance with the PM emissions limitation of Section III.X.8 shall be monitored using EPA reference Method 5 testing, or another testing Method as approved in writing by the Department (ARM 17.8.1213).

X.19. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.X.9 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).
Recordkeeping

X.20. All source test recordkeeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

X.21. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 60 Subpart J (ARM 17.8.340 and 40 CFR 60 Subpart J).

X.22. CHS shall conduct all applicable recordkeeping requirements in accordance with 40 CFR 63 Subpart UUU (ARM 17.8.342 and 40 CFR 63 Subpart UUU).

X.23. CHS shall maintain records of fuel type fired in the Zone E TGI (ARM 17.8.1213).

Reporting

X.24. All source test reports shall be submitted to the Department in accordance with Section III.A.2 (ARM 17.8.106).

X.25. CHS shall submit the quarterly emission reports within 30 days of the end of each reporting period. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or up-loaded to the State of Montana’s File Transfer Service using the Air Quality Bureau's Administrative email address as the recipient (or equivalent service. Emissions reporting for SO$_2$ from the emission rate monitors shall consist of a daily 24-hour average concentration (ppm SO$_2$, corrected to 0% O$_2$) and a 24-hour total (lb/day) for each calendar day. The report shall include the following (ARM 17.8.749, ARM 17.8.340 and 40 CFR 60 Subpart J):

a. Source or unit operating time during the reporting period;
b. Quarterly fuel gas consumption rates;
c. Monitoring downtime that occurred during the reporting period;
d. A summary of excess emissions or applicable concentrations for each pollutant and the averaging period identified in Section III.X.3, III.X.4, III.X.5, and III.X.6;
e. Compliance determinations for hourly, 24-hour and annual limits specifically allowed in Section III.X.3, III.X.4, III.X.5, and III.X.6 (ARM 17.8.749); and
f. Reasons for any emissions in excess of those specifically allowed in Section III.X.3, III.X.4, III.X.5, and III.X.6 with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

X.26. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

X.27. The semiannual monitoring report shall provide (ARM 17.8.1212):
a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. Summary of the records required by Section III.X.23;

c. Summary of compliance with 40 CFR 60 Subpart J during the reporting period. This reporting requirement does not require the permittee to submit any report or compliance status determination earlier than is required by 40 CFR 60 Subpart J;

d. Summary of compliance with 40 CFR 63 Subpart UUU during the reporting period. This reporting requirement does not require the permittee to submit any report or compliance status determination earlier than is required by 40 CFR 63 Subpart UUU; and

e. Summary of compliance with unit emission limits and conditions of this section and dates that quarterly reports were submitted as required by Section III.X.25.

Y. EU024 – Ammonia Combustor

<table>
<thead>
<tr>
<th>Condition(s)</th>
<th>Pollutant/Parameter</th>
<th>Permit Limit</th>
<th>Compliance Demonstration Method</th>
<th>Reporting Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y.1, Y.8, Y.17, Y.18, Y.20, Y.21</td>
<td>Opacity</td>
<td>No visible emissions except for up to 5 minutes during consecutive 2-hr periods</td>
<td>Method 9</td>
<td>As required by the Department and Section III.A.1</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td>As required by the Protocol</td>
</tr>
<tr>
<td>Y.2, Y.3, Y.9, Y.15, Y.17, Y.18, Y.19, Y.20, Y.21</td>
<td>NOx</td>
<td>Less than 61 ppmv at 3 percent O2 365-day rolling average 1.85 lb/hr rolling 24-hr average</td>
<td>CEMS</td>
<td>On-going</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Semiannually</td>
</tr>
<tr>
<td>Y.4, Y.10, Y.17, Y.18, Y.20, Y.21</td>
<td>Ammonia</td>
<td>10 ppmv at 3% O2</td>
<td>Source Test</td>
<td>Every Four Years</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Semiannually</td>
</tr>
<tr>
<td>Y.5, Y.6, Z.7, Y.11, Y.12, Y.13, Y.14, Y.16, Y.17, Y.18, Y.19, Y.20, Y.21</td>
<td>SO2</td>
<td>1) 20 ppmv on a dry basis, corrected to 0% excess air, determined hourly on a 3-hour rolling average basis 2) SO2 in excess of 8 ppmv on a dry basis, corrected to 0% excess air, determined daily on a 365-successive calendar day rolling average basis 3) SO2 in excess of 0.80 lb/hr</td>
<td>CEMS</td>
<td>40 CFR 60 Subpart Ja</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Semiannually</td>
</tr>
</tbody>
</table>
Conditions

Y.1. The Ammonia Combustor shall be operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours as determined by visual survey (ARM 17.8.752).

Y.2. CHS shall install and operate Selective Catalytic Reduction technology on the Ammonia Combustor to achieve NO\textsubscript{x} emissions of no more than 61 ppmv at 3 percent O\textsubscript{2} on a 365-day rolling average basis, as measured by NO\textsubscript{x} CEMS and calculated on each calendar day basis, applicable at all times, including startup and shutdown (ARM 17.8.752).

Y.3. CHS shall not emit more than 1.85 lb/hr of NO\textsubscript{x} on a rolling 24-hr average basis from the Ammonia Combustor, as measured by NO\textsubscript{x} CEMS and stack flowrate monitor with appropriate moisture correction defined by the initial source test. This limit shall not apply during startup and shutdown of the unit when the SCR is not at its design operating temperature (ARM 17.8.749).

Y.4. Ammonia emissions from the Ammonia Combustor shall not exceed 10 ppmv at 3% O\textsubscript{2} (ARM 17.8.752).

Y.5. CHS shall not emit from the Ammonia Combustor SO\textsubscript{2} in excess of the following, as measured by SO\textsubscript{2} CEMS (ARM 17.8.752):

   a. 20 ppmv on a dry basis, corrected to 0% excess air, determined hourly on a 3-hour rolling average basis, and;

   b. SO\textsubscript{2} in excess of 8 ppmv on a dry basis, corrected to 0% excess air, determined daily on a 365-successive calendar day rolling average basis.

Y.6. CHS shall not emit from the Ammonia Combustor SO\textsubscript{2} in excess of 0.80 lb/hr (ARM 17.8.749).

Y.7. CHS shall comply with all applicable requirements of 40 CFR 60 Subpart Ja (ARM 17.8.340 and 40 CFR 60 Subpart Ja).

Compliance Demonstration

Y.8. CHS shall perform a Method 9 test using a qualified observer as required by the Department and Section III.A.1. The test methods and procedures shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106 and ARM 17.8.1213).

Y.9. CHS shall utilize a NO\textsubscript{x} CEMs and stack flow rate monitor to provide the data necessary to demonstrate compliance with Section III.Y.2 and Y.3 (ARM 17.8.1213).

Y.10. CHS shall perform source testing for NH\textsubscript{3} utilizing methodology as agreed in writing by CHS and the Department, on an every four year basis to satisfy Section III.Y.4 (ARM 17.8.1213).
Y.11. CHS shall monitor compliance with the SO₂ emissions limitations of Section III.Y.5 according to 40 CFR 60.8 and 40 CFR 60.104a, and 40 CFR 60.107a, and as otherwise described in 40 CFR 60 Subpart Ja. CHS shall comply with all applicable monitoring and recordkeeping requirements of 40 CFR 60 Subpart Ja (ARM 17.8.1213, ARM 17.8.340, and 40 CFR 60 Subpart Ja).

Y.12. CHS shall monitor compliance with Section III.Y.6 with emissions data from the SO₂ CEMS and stack flowrate monitor required to also satisfy Section III.Y.5 (ARM 17.8.1213).

Y.13. CHS shall monitor compliance with 40 CFR 60 Subpart Ja as required by 40 CFR 60 Subpart Ja (ARM 17.8.1213).

**Recordkeeping**

Y.14. All test records must be maintained on site and submitted to the Department in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106 and ARM 17.8.1212).

Y.15. CHS shall maintain on site the records from the NOₓ, SO₂ CEMS and stack flowrate monitor (ARM 17.8.1212).

Y.16. CHS shall comply with all applicable recordkeeping and notification requirements contained in 40 CFR 60 Subpart Ja (ARM 17.8.342 and 40 CFR Part 60, Subpart Ja).

Y.17. CHS shall perform all source test recordkeeping in accordance with the appropriate test method and Section III.A.2 (ARM 17.8.106).

**Reporting**

Y.18. All source test reports shall be submitted to the Department in accordance with Section III.A.2 (ARM 17.8.106).

Y.19. CHS shall submit the quarterly emission reports within 30 days of the end of each reporting period. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or uploaded to the State of Montana’s File Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service. The emission reports for SO₂ and NOₓ shall include (ARM 17.8.1212):

   i. a summary of any excess emissions;

   ii. reasons for any excess emissions with mitigative measures utilized and corrective action taken to prevent recurrence, and

   iii. compliance determinations with associated limits

Y.20. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

Y.21. The semiannual monitoring report shall provide (ARM 17.8.1212):
a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

b. Summary of compliance with unit emission limits and conditions and dates that quarterly reports were submitted as required by Section III.Y.19;

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

Z. EU025 – Hydrogen Plant #3

<table>
<thead>
<tr>
<th>Condition(s)</th>
<th>Pollutant/Parameter</th>
<th>Permit Limit</th>
<th>Compliance Demonstration Method</th>
<th>Frequency</th>
<th>Reporting Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z.1, Z.19, Z.25, Z.30, Z.31, Z.35, Z.36</td>
<td>Opacity</td>
<td>20 Percent</td>
<td>Method 9</td>
<td>As required by the Department and Section III.A.1</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Z.3, Z.4, Z.20, Z.21, Z.22, Z.25, Z.26, Z.30, Z.31, Z.35, Z.36</td>
<td>NOx</td>
<td>1) 25.16 tons/rolling - 12-calendar month total 2) 5.62 lb/hr 365-day rolling average including startup and shutdown 3) 22.5 lb/hr during periods of startup rolling 24-hr average 4) Tested Concurrently with CO</td>
<td>Method 7 CEMS</td>
<td>Every Three Years/ On-going.</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Condition(s)</td>
<td>Pollutant/Parameter</td>
<td>Permit Limit</td>
<td>Compliance Demonstration Method</td>
<td>Frequency</td>
<td>Reporting Requirements</td>
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<tr>
<td>Z.6, Z.20, Z.21, Z.22, Z.31, Z.35, Z.36</td>
<td>H_{2}S</td>
<td>1) Not combust in excess of 162 ppmvd H_{2}S determined hourly on a 3-hr rolling average. 2) Not combust in excess of 60 ppmvd H_{2}S on a 365-successive calendar rolling basis</td>
<td>RFG System CEMS See Section B. Fuel Consumption Recordkeeping</td>
<td>On-going</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Z.7, Z.20, Z.21, Z.22, Z.25, Z.26, Z.30, Z.31, Z.35, Z.36</td>
<td>CO</td>
<td>1) 91.08 tons per rolling 12-calendar month total 2) 20.8 lb/hr 365-day rolling average 3) 41.6 lb/hr during periods of startup on a rolling 36-hr average 4) Tested Concurrently with NOx</td>
<td>Method 10 CEMS</td>
<td>Every Three Years/ On-going</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Z.8, Z.20, Z.25, Z.26, Z.30, Z.31, Z.35, Z.36</td>
<td>VOC</td>
<td>1.26 lb/hr</td>
<td>Method 18 and Method 25 or another Method as agreed in writing</td>
<td>As Required by the Department</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Z.9, Z.20, Z.25, Z.26, Z.30, Z.31, Z.35, Z.36</td>
<td>PM_{10}/PM_{2.5}</td>
<td>4.2 lb/hr</td>
<td>Method 5 or Method 201 and Method 202</td>
<td>Once every 6-years</td>
<td>Semiannually</td>
</tr>
<tr>
<td>Z.12, Z.20, Z.25, Z.35, Z.36</td>
<td>CO, VOC and PM/PM10</td>
<td>Proper design and good combustion practices</td>
<td>Recordkeeping</td>
<td>On-going</td>
<td>Semiannually</td>
</tr>
</tbody>
</table>
### Conditions

**Z.1.** CHS shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the Hydrogen Reformer Unit Heater (067HT0001) an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 (2)) and ARM 17.8.1212).

**Z.2.** The Hydrogen Reformer Heater shall be equipped with low NO₅ burners and selective catalytic reduction (SCR); and ammonia slip shall not exceed 10 ppm average ammonia demonstrated for performance tests (ARM 17.8.1212 and 17.8.752).

**Z.3.** CHS shall maintain documentation of the necessary catalyst operating temperature on-site for each type of catalyst used in the SCR to satisfy the condition in Section III.Z.4(c) (ARM 17.8.1212).

**Z.4.** NO₅ emissions from the Hydrogen Reformer Heater shall not exceed:

- a. 25.16 tons/rolling 12-calendar month total (ARM 17.8.1212);
- b. 5.62 lb/hr 365-day rolling average including startup and shutdown based on NO₅ CEMS (ARM 17.8.1212 and 17.8.752);
- c. 22.5 lb/hr during periods of startup, on an hourly rolling 24-hour average basis. Startup begins when fuel is first fired and startup ends when the SCR inlet reaches its required temperature and ammonia injection has been established (ARM 17.8.1212 and 17.8.752).

**Z.5.** SO₂ emissions from the Hydrogen Reformer Heater shall not exceed (ARM 17.8.1212 and 17.8.752):

- a. 9.76 tons/12-month rolling total;

<table>
<thead>
<tr>
<th>Condition(s)</th>
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</tr>
</thead>
</table>
b. 6.0 lb/hr based on a 3-hr rolling average.

Z.6. CHS shall not burn any fuel gas in the Hydrogen Reformer Heater that contains H₂S in excess of 162 ppmvd determined hourly on a 3-hour rolling average basis and H₂S in excess of 60 ppmvd determined daily on a 365-successive calendar day rolling average basis (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart Ja).

Z.7. CO emissions from the Hydrogen Reformer Heater shall not exceed:
   a. 91.08 tons/rolling 12-calendar month total (ARM 17.8.1212);
   b. 20.8 lb/hr 365-day rolling average based on CO CEMS (ARM 17.8.1212 and 17.8.752);
   c. 41.6 lb/hr during periods of startup, on an hourly rolling 36-hr average basis (ARM 17.8.1212 and 17.8.752).

Z.8. VOC emissions from the Hydrogen Reformer Heater shall not exceed 1.26 lb/hr based on EPA Reference Methods 18 and 25, or another methodology as agreed in writing between CHS and the Department (ARM 17.8.1212 and ARM 17.8.752).

Z.9. PM₁₀/PM₂.₅ emissions from the Hydrogen Reformer Heater shall not exceed 4.2 lb/hr based on EPA Reference Methods 5 or 201 and 202 (ARM 17.8.1212 and 17.8.752).

Z.10. CHS shall not exceed 879,697 tons per year total CO₂, (rolling 12-month total) from the Hydrogen Reformer Heater and the FCCU regenerator (Section III.I) (ARM 17.8.1212 and 17.8.752).

Z.11. CO₂e emissions from the Hydrogen Reformer Heater shall be minimized by:
   a. Firing only PSA tailgas, RFG or pipeline quality natural gas (ARM 17.8.1212 and 17.8.752);

Z.12. CO, VOC and PM/PM₁₀ emissions on the Hydrogen Reformer Heater shall be controlled by proper design and good combustion practices (ARM 17.8.1212 and 17.8.752).

Z.13. CHS shall install, operate, calibrate, and maintain the following CEMS/CERMS for the Hydrogen Reformer Heater:
   a. NOₓ (40 CFR 60, Subpart Ja)
   b. O₂ (40 CFR 60, Subpart Ja)
   c. H₂S on fuel gas systems (not individual heaters). This is not required if either natural gas or PSA tailgas are used as these fuels are exempt from Subpart Ja due to their characteristics (40 CFR 60, Subpart Ja).
d. Stack Flow Rate (ARM 17.8.1212)

e. CO (ARM 17.8.1212)


Z.15. 40 CFR 60 Subpart GGGa – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006, applies to the Hydrogen Plant #3. The compressors in the Hydrogen Plant #3 are subject to Subpart GGGa when processing Refinery Fuel Gas (RFG) or other process gases. When the unit feed is natural gas, the compressors are not considered to be in VOC service (ARM 17.8.340, 17.8.1212 and 40 CFR 60 subpart GGGa).


Z.17. 40 CFR 63 Subpart CC - NESHAP from Petroleum Refineries shall apply to applicable components in Hydrogen Plant #3 with the potential for greater than five percent weight HAP (ARM 17.8.342, 17.8.1212 and 40 CFR 63 Subpart CC).


**Compliance Demonstration**

Z.19. CHS shall perform a Method 9 test using a qualified observer as required by the Department and Section III.A.1. The test methods and procedures shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106 and ARM 17.8.1213).

Z.20. CHS shall perform source testing and/or demonstrate compliance for the Hydrogen Reformer Heater for the pollutants listed below with the EPA reference methods and methodologies at the frequencies indicated:

a. NOx – Every three years from the date of the last source test using EPA Method 7 in conjunction with annual CEMS/CERMS RATA performance testing in accordance with Appendix F (40 CFR Part 60) requirements, or according to another testing/monitoring schedule as may be approved by the Department, for NOx and CO (EPA Methods 7 and 10), concurrently, and the results submitted to the Department in order to demonstrate compliance with the NOx and CO emission limits (ARM 17.8.105 and ARM 17.8.1212, 40 CFR 60, Subpart Ja).
b. **CO** – Every three years from the date of the last source test using EPA Method 10 in conjunction with the annual CEMS/CERMS RATA performance testing in accordance with Appendix F (40 CFR Part 60 and ARM 17.8.1212).

c. **VOC** – EPA Method 18 and 25, or another method as agreed in writing between CHS and the Department. As requested by the Department (ARM 7.8.1212).

d. **PM_{10}/PM_{2.5}** – EPA Method 5 or 201 and 202. Once every six years (ARM 7.8.1212).

e. **Ammonia Slip** – The Hydrogen Reformer Heater was initially tested within 180 days of Hydrogen Reformer Heater startup, and then must be tested with two years after the initial test date, and thereafter, only as requested by the Department to demonstrate compliance with the 10 ppm limit. The ammonia testing protocol shall be determined using a methodology as agreed in writing between CHS and the Department (ARM 17.8.1212 and 17.8.752).

f. **CO₂e Emissions** – For the hydrogen reformer heater compliance shall be demonstrated following the calculation procedures of 40 CFR part 98 subpart P. For the FCCU regenerator, compliance shall be demonstrated following the calculation procedures of 40 CFR part 98 subpart Y (ARM 17.8.1212 and ARM 17.8.752).

g. **SO₂** – Compliance is demonstrated using an appropriate emission factor applied to fuel consumption when firing natural gas or using an H₂S CEM when RFG is being fired. When firing PSA tail gas, no sulfur is present and no calculation is required (ARM 17.8.1212).

Z.21. CEMS and CERMS required by this permit shall comply with all applicable provisions of 40 CFR Parts 60.5 through 60.13, Subparts Ja, 60.100a-60.108a, and Appendix B, Performance Specifications 2, 3, 6, and Appendix F; and 40 CFR 52, Appendix E, for certifying Volumetric Flow Rate Monitors (ARM 17.8.1212).

Z.22. CEMS are to be in operation at all times when the emission units are operating, except for quality assurance and control checks, and breakdowns and repairs of CEMS related equipment. In the event the primary CEMS is unable to meet minimum availability requirements, the recipient shall provide a back-up or alternative monitoring system and plan such that continuous compliance can be demonstrated (ARM 17.8.1212).

Z.23. CHS shall demonstrate compliance with 40 CFR 60 Subpart GGGa and Subpart QQQ (40 CFR 60 Subpart GGGa, Subpart QQQ and ARM 17.8.1212).

Z.24. CHS shall demonstrate compliance with 40 CFR 63 Subpart CC and Subpart DDDDD (40 CFR 63 Subpart CC, Subpart DDDDD and ARM 17.8.1212).

**Recordkeeping**

Z.25. All test records must be maintained on site and submitted to the Department in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106 and ARM 17.8.1212).
Z.26. CHS shall document, by month, the total emissions from Hydrogen Reformer Heater. The monthly information shall be used to verify compliance with the rolling 12-month limitations within this permit (ARM 17.8.1212).

Z.27. CHS shall comply with the recordkeeping requirements including LDAR contained in 40 CFR 60, Subpart VVa (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).

Z.28. CHS shall comply with the recordkeeping requirements in 40 CFR 60 Subpart Ja, Subpart GGGa, and Subpart QQQ (ARM 17.8.340, 40 CFR 60 Subpart Ja, and 40 CFR 60 Subpart QQQ).

Z.29. CHS shall comply with the recordkeeping requirements 40 CFR 63 Subpart CC and 40 CFR 63 Subpart DDDDD (ARM 17.8.342, 40 CFR 63 Subpart CC and 40 CFR 63 Subpart DDDDD).

**Reporting**

Z.30. All source test reports shall be submitted to the Department in accordance with Section III.A.2 (ARM 17.8.106).

Z.31. CHS shall submit the quarterly emission reports within 30 days of the end of each reporting period. The reports shall be submitted electronically to the Helena Air Quality Bureau’s Administrative email address, or uploaded to the State of Montana’s File Transfer Service using the Air Quality Bureau’s Administrative email address as the recipient (or equivalent service). Emission reports from the Hydrogen Reformer Heater shall include (ARM 178.1212):

   a. a summary of any excess emissions;

   b. reasons for any excess emissions with mitigative measures utilized and corrective action taken to prevent recurrence, and

   c. compliance determinations with associated limits;

   d. Monitoring downtime associated with the CEMS/CERMS required in Section III.Z.13 that occurred during the reporting period;

   e. Source or unit operating time during the reporting period and quarterly fuel gas consumption rates.

Z.32. CHS shall comply with the reporting requirements including LDAR contained in 40 CFR 60, Subpart VVa (ARM 17.8.340 and 40 CFR 60 Subpart GGGa).

Z.33. CHS shall comply with the reporting requirements contained in 40 CFR 60, Subpart Ja and 40 CFR 60 Subpart QQQ (ARM 17.8.340, 40 CFR 60 Subpart Ja and 40 CFR 60 Subpart QQQ).

Z.34. CHS shall comply with the reporting requirements contained in 40 CFR 63, Subpart CC and Subpart DDDDD (ARM 17.8.342, CFR 63 Subpart CC and Subpart DDDDD).
Z.35. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

Z.36. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of any source tests required and submitted to the Department during the reporting period, which shall include the date the source test report was performed, the date the source test was submitted to the Department, and noting if the test indicated compliance or noncompliance with associated limits;

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

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

d. Summary of compliance with 40 CFR 60 Subpart QQQ during the reporting period. This reporting requirement does not require the permittee to submit any report or compliance status determination earlier than is required by 40 CFR 60 Subpart QQQ;

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

f. Summary of compliance with 40 CFR 63 Subpart DDDDD during the reporting period. This reporting requirement does not require the permittee to submit any report or compliance status determination earlier than is required by 40 CFR 63 Subpart DDDDD;

g. Summary of compliance with unit emission limits and conditions and dates that quarterly emission reports were submitted as required by Section III.Z.31.

AA. EU026 - Stationary Engines

- Emergency Generators
  Admin 1 EG (Admin1Gen) (021-GN-0204)
  Zone C DCS EG (024-SG-001)
  Zone D DCS EG (024-SG-001)
  Zone E DCS EG (075-SG-001)
  CCB EG1 (002-SG-002)
  CCB EG2 (002-SG-003)
  Zone A DCS EG (004-SG-001)
  Westside Complex EG (002-SG-001)
  Zone D DCS EG (065-SG-003)
  Zone B DCS EG (004-SG-025)
  Truck Terminal EG (LrlTermGen)
Admin 3 EG (Admin3Gen) (021-GN-1031)

- **Diesel Fire Water Pump Engines**
  - East Fire Pump #1 (EG-2205)
  - East Fire Pump #2 (EG-2206)
  - Tank 134 East Pump (P-2207)
  - Tank 134 West Pump (P-2208)
  - West Diesel Pump (P-2204)

- **Emergency Plant Air Compressors**
  - Zone C Plant Air Compressor (024CO0064)
  - Zone E Plant Air Compressor (026CO0004)

<table>
<thead>
<tr>
<th>Equipment #</th>
<th>Description</th>
<th>NSPS Subpart IIII</th>
<th>NSPS Subpart JJJJ</th>
<th>40 CFR 63 Subpart ZZZZ</th>
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<td>075-SG-001</td>
<td>Zone E DCS EG</td>
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<td>002-SG-002</td>
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<td>Westside Complex EG</td>
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<td>P-2208</td>
<td>Tank 134 West Pump</td>
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<td>P-2204</td>
<td>West Diesel Pump</td>
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<th>Pollutant/Parameter</th>
<th>Permit Limit</th>
<th>Compliance Demonstration Method</th>
<th>Frequency</th>
<th>Reporting Requirements</th>
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<td>40 CFR 60 Subpart III</td>
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Decision: 5/26/2021
Effective Date: 6/26/2021
### Condition(s)

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<th>Pollutant/Parameter</th>
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<th>Frequency</th>
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<td>AA.2, AA.6, AA.10, AA.14, AA.16, AA.17</td>
<td>40 CFR 63 Subpart ZZZZ</td>
<td>40 CFR 63 Subpart ZZZZ</td>
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<td>Reporting Requirements</td>
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<td>40 CFR 60 Subpart JJJJ</td>
<td>40 CFR 60 Subpart JJJJ</td>
<td>40 CFR 60 Subpart JJJJ</td>
<td>Reporting Requirements</td>
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<td>AA.4, AA.8, AA.12, AA.16, AA.17</td>
<td>Ultra-Low Sulfur Diesel</td>
<td>0.0015% sulfur content</td>
<td>Recordkeeping</td>
<td>Ongoing</td>
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</tbody>
</table>

### AA.1
CHS shall comply with the applicable requirements of 40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines; for Tank 134 East Pump (P-2207), Tank 134 West Pump (P-2208) and the West Diesel Pump (P-2204) (ARM 17.8.340 and 40 CFR 60 Subpart IIII).

### AA.2
CHS shall comply with the applicable requirements 40 CFR 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for all units listed under (EU026) Stationary Engines (ARM 17.8.342 and 40 CFR 63 Subpart ZZZZ).

### AA.3
CHS shall comply with the applicable requirements of 40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines; for the Zone B DCS EG (004-SG-025), Westside Complex EG (002-SG-001), Zone D DCS EG (065-SG-003), Zone A DCS EG (004-SG-001), Truck Terminal EG (LrlTermGen), Admin 3 EG (21-GN-1031) (ARM 17.8.340 and 40 CFR 60 Subpart IIII).

### AA.4
CHS shall use only ultra-low-sulfur diesel fuel with a sulfur content less than or equal to 0.0015% in the diesel-fired engines (40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ and ARM 17.8.749).

#### Compliance Demonstration

### AA.5
CHS 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).

### AA.6
CHS shall demonstrate compliance with 40 CFR 63 Subpart ZZZZ through the applicable compliance requirements of 40 CFR 63 Subpart ZZZZ (ARM 17.8.342 and 40 CFR 63 Subpart ZZZZ).

### AA.7
CHS shall demonstrate compliance with 40 CFR 60 Subpart JJJJ through the applicable monitoring and compliance requirements of 40 CFR 60 Subpart JJJJ (ARM 17.8.340 and 40 CFR 60 Subpart JJJJ).
AA.8. CHS shall demonstrate compliance with the horsepower rating and EPA certification limitations of Section III.AA.4 by keeping records of manufacturer specification sheets demonstrating maximum rated horsepower and EPA Tier 3 specification (ARM 17.8.1212).

Recordkeeping

AA.9. CHS 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).

AA.10. CHS shall comply with the applicable reporting requirements of 40 CFR 63, Subpart ZZZZZ including any applicable requirements of 40 CFR 63.6655 (ARM 17.8.342 and 40 CFR 63 Subpart ZZZZZ).

AA.11. CHS shall comply with the applicable recordkeeping requirements of 40 CFR 60 Subpart JJJJJ including any applicable recordkeeping requirements (ARM 17.8.340 and 40 CFR 60 Subpart JJJJJ).

AA.12. CHS 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, CHS 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).

Reporting

AA.13. CHS 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.

AA.14. CHS shall comply with the applicable notification and reporting requirements of 40 CFR 63 Subpart ZZZZZ, including any applicable requirements of 40 CFR 63.6650.

AA.15. CHS shall comply with the applicable notification and reporting requirements of 40 CFR 60 Subpart JJJJJ including any applicable notification and reporting requirements.

AA.16. The semiannual reporting shall provide (ARM 17.8.1212):

a. Statement of demonstration methodology regarding the sulfur content of diesel fuel fired in the engines.

b. 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.

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

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

AA.17. 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 that are administrated by the Air Quality Bureau of the Department of Environmental Quality.

<table>
<thead>
<tr>
<th>Rule Citation</th>
<th>Reason</th>
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<tbody>
<tr>
<td>ARM 17.8.320, ARM 17.8.321, ARM 17.8.326, ARM 17.8.330, ARM 17.8.331, ARM 17.8.332, ARM 17.8.333, ARM 17.8.771, ARM 17.8.1601-17.8.1606, ARM 17.8.1701-17.8.1705, and ARM 17.8.1710-17.8.1713</td>
<td>These rules are not applicable because the facility is not listed in the source category cited or does not have the specific emission unit(s) cited in the rules.</td>
</tr>
<tr>
<td>40 CFR 60 Subparts B, C, Cb-Cf, 40 CFR 60 Subparts D, Da, Dc, 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 Subpart WW, 40 CFR 60 Subparts AAA-BBB, 40 CFR 60 Subpart DDD, 40 CFR 60 Subparts FFF, 40 CFR 60 Subparts HHH-LLL, 40 CFR 60 Subparts NNN-PPP, 40 CFR 60 Subparts RRR-XXX, 40 CFR 60 Subparts AAAA-FFFF, 40 CFR 60 Subparts KKKK-MMMM, 40 CFR 60 Subpart OOOO-OOOOa, 40 CFR 60 Subpart QQQQ, 40 CFR 60 Subparts TTTT-UUUU</td>
<td>These requirements are not applicable because the facility is not an affected source as defined in these regulations.</td>
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<tr>
<td>40 CFR 61 Subparts B-F, 40 CFR 61 Subparts H-L, 40 CFR 61 Subparts N-R, 40 CFR 61 Subpart T</td>
<td>These requirements are not applicable because the facility is not an affected source as defined in these regulations.</td>
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<tr>
<td>40 CFR 61 Subparts W</td>
<td>These requirements are not applicable because the facility is not an affected source as defined in these regulations.</td>
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<td>40 CFR 61 Subpart Y</td>
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<td>40 CFR 61 Subpart BB</td>
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<td>40 CFR 63 Subparts I-J</td>
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<td>These requirements are not applicable because the facility is not an affected source as defined by the acid rain regulations.</td>
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<td>40 CFR 87, 40 CFR 91, 40 CFR 92, and 40 CFR 94</td>
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<td>40 CFR 55, 57 and 59</td>
<td>These requirements are not applicable to this source</td>
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B. Emission Units

The permit application identified applicable requirements as well as non-applicable requirements. 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); and

   d. Such other facts as the Department may require to determine the compliance status of the source.

4. All compliance certifications must be submitted to the Environmental Protection Agency, as well as to the Department, at the addresses listed in the Notification Addresses Appendix C 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; and
g. The ability of the Department to establish or revise requirements for the use of Reasonably Available Control Technology (RACT) as defined in ARM Title 17, Chapter 8. However, if the inclusion of a RACT into the permit pursuant to ARM Title 17, Chapter 8, Subchapter 12, is appealed to the Board, the permit shield, as it applies to the source’s existing permit, shall remain in effect until such time as the Board has rendered its final decision.

4. Nothing in this permit alters or affects the ability of the Department to take enforcement action for a violation of an applicable requirement or permit term demonstrated pursuant to ARM 17.8.106, Source Testing Protocol.

5. Pursuant to ARM 17.8.132, for the purpose of submitting a compliance certification, nothing in these rules shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance. However, when compliance or noncompliance is demonstrated by a test or procedure provided by permit or other applicable requirements, the source shall then be presumed to be in compliance or noncompliance unless that presumption is overcome by other relevant credible evidence.

6. The permit shield will not extend to minor permit modifications or changes not requiring a permit revision (see Sections I & J).

7. The permit shield will extend to significant permit modifications and transfer or assignment of ownership (see Sections K & O).

D. Monitoring, Recordkeeping, and Reporting Requirements

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

1. Unless otherwise provided in this permit, the permittee shall maintain compliance monitoring records that include the following information:
   a. The date, place as defined in the permit, and time of sampling or measurement;
   b. The date(s) analyses were performed;
   c. The company or entity that performed the analyses;
   d. The analytical techniques or methods used;
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.

The permittee shall submit to the Department, at the addresses located in the Notification Addresses 0 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

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; and,
   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; and

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; and
   d. The permittee submitted notice of the emergency to the Department within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirements of ARM 17.8.1212(3)(b). This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

3. These emergency provisions are in addition to any emergency, malfunction or upset provision contained in any applicable requirement.

G. Inspection and Entry
ARM 17.8, Subchapter 12, Operating Permit Program §1213(3)&(4)
1. Upon presentation of credentials and other requirements as may be required by law, the permittee shall allow the Department, the administrator, or an authorized representative (including an authorized contractor acting as a representative of the Department or the administrator) to perform the following:

   a. Enter the premises where a source required to obtain a permit is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

   c. Inspect at reasonable times any facilities, emission units, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

   d. As authorized by the Montana Clean Air Act and rules promulgated thereunder, sample or monitor, at reasonable times, any substances or parameters at any location for the purpose of assuring compliance with the permit or applicable requirements.

2. The permittee shall inform the inspector of all workplace safety rules or requirements at the time of inspection. This section shall not limit in any manner the Department’s statutory right of entry and inspection as provided for in 75-2-403, MCA.

H. Fee Payment

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

1. The permittee must pay application and operating fees, pursuant to ARM Title 17, Chapter 8, Subchapter 5.

2. Annually, the Department shall provide the permittee with written notice of the amount of the fee and the basis for the fee assessment. The air quality operation fee is due 30 days after receipt of the notice, unless the fee assessment is appealed pursuant to ARM 17.8.511. If any portion of the fee is not appealed, that portion of the fee that is not appealed is due 30 days after receipt of the notice. Any remaining fee, which may be due after the completion of an appeal, is due immediately upon issuance of the Board’s decision or upon completion of any judicial review of the Board’s decision.

3. If the permittee fails to pay the required fee (or any required portion of an appealed fee) within 90 days of the due date of the fee, the Department may impose an additional assessment of 15% of the fee (or any required portion of an appealed fee) or $100, whichever is greater, plus interest on the fee (or any required portion of an appealed fee), computed at the interest rate established under 15-31-510(3), MCA.
I. Minor Permit Modifications  
ARM 17.8, Subchapter 12, Operating Permit Program §1226(3)&(11)

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

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

J. Changes Not Requiring Permit Revision  
ARM 17.8, Subchapter 12, Operating Permit Program §1224(1)-(3), (5)&(6)

1. The permittee is authorized to make changes within the facility as described below, provided the following conditions are met:
   a. The proposed changes do not require the permittee to obtain an air quality preconstruction 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; and
   e. The facility provides the administrator and the Department with written notification at least 7 days prior to making the proposed changes.

2. The permittee and the Department shall attach each notice provided pursuant to 1.e above to their respective copies of this permit.

3. Pursuant to the conditions above, the permittee is authorized to make Section 502(b)(10) changes, as defined in ARM 17.8.1201(30), without a permit revision. For each such change, the written notification required under 1.e above shall include a description of the change within the source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

4. The permittee may make a change not specifically addressed or prohibited by the permit terms and conditions without requiring a permit revision, provided the following conditions are met:
a. Each proposed change does not weaken the enforceability of any existing permit conditions;

b. The Department has not objected to such change;

c. Each proposed change meets all applicable requirements and does not violate any existing permit term or condition; and

d. The permittee provides contemporaneous written notice to the Department and the administrator of each change that is above the level for insignificant emission units as defined in ARM 17.8.1201(22) and 17.8.1206(3), and the written notice describes each such change, including the date of the change, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

5. The permit shield authorized by ARM 17.8.1214 shall not apply to changes made pursuant to ARM 17.8.1224(3) and (5), but is applicable to terms and conditions that allow for increases and decreases in emissions pursuant to ARM 17.8.1224(4).

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

1. The modification procedures set forth in 2 below must be used for any application requesting a significant modification of this permit. Significant modifications include the following:

   a. Any permit modification that does not qualify as either a minor modification or as an administrative permit amendment;

   b. Every significant change in existing permit monitoring terms or conditions;

   c. Every relaxation of permit reporting or recordkeeping terms or conditions that limit the Department’s ability to determine compliance with any applicable rule, consistent with the requirements of the rule; or

   d. Any other change determined by the Department to be significant.

2. Significant modifications shall meet all requirements of ARM Title 17, Chapter 8, including those for applications, public participation, and review by affected states and the administrator, as they apply to permit issuance and renewal, except that an application for a significant permit modification need only address in detail those portions of the permit application that require revision, updating, supplementation or deletion.

3. The permit shield provided for in ARM 17.8.1214 shall extend to significant modifications.

L. Reopening For Cause
   ARM 17.8, Subchapter 12, Operating Permit Program §1228(1)&(2)
This permit may be reopened and revised under the following circumstances:

1. Additional applicable requirements under the FCAA become applicable to the facility when the permit has a remaining term of 3 or more years. Reopening and revision of the permit shall be completed not later than 18 months after promulgation of the applicable requirement. No reopening is required under ARM 17.8.1228(1)(a) if the effective date of the applicable requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms or conditions have been extended pursuant to ARM 17.8.1220(12) or 17.8.1221(2);

2. Additional requirements (including excess emission requirements) become applicable to an affected source under the Acid Rain Program. Upon approval by the administrator, excess emission offset plans shall be deemed incorporated into the permit;

3. The Department or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit; or

4. The administrator or the Department determines that the permit must be revised or revoked and reissued to ensure compliance with the applicable requirements.

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

1. This permit is issued for a fixed term of 5 years.

2. Renewal of this permit is subject to the same procedural requirements that apply to permit issuance, including those for application, content, public participation, and affected state and administrator review.

3. Expiration of this permit terminates the permittee’s right to operate unless a timely and administratively complete renewal application has been submitted consistent with ARM 17.8.1221 and 17.8.1205(2)(d). If a timely and administratively complete application has been submitted, all terms and conditions of the permit, including the application shield, remain in effect after the permit expires until the permit renewal has been issued or denied.

4. For renewal, the permittee shall submit a complete air quality operating permit application to the Department not later than 6 months prior to the expiration of this permit, unless otherwise specified. If necessary to ensure that the terms of the existing permit will not lapse before renewal, the Department may specify, in writing to the permittee, a longer time period for submission of the renewal application. Such written notification must be provided at least 1 year before the renewal application due date established in the existing permit.

N. Severability Clause
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

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 ARM 17.8.1214 shall not extend to administrative permit amendments.

P. Emissions Trading, Marketable Permits, Economic Incentives

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

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

R. Testing Requirements

The permittee shall comply with ARM 17.8.105.

S. Source Testing Protocol

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; or

e. Emission reductions obtained through offsetting within a facility are not included when determining the potential emission increase from construction or changed conditions of operation, unless such reductions are made federally enforceable.

4. Any facility making a de minimis change pursuant to ARM 17.8.745(1) shall notify the Department if the change would include a change in control equipment, stack height, stack diameter, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1).

Z. National Emission Standard for Asbestos

40 CFR 61, Subpart M

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

AA. Asbestos

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

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

BB. Stratospheric Ozone Protection – Servicing of Motor Vehicle Air Conditioners

40 CFR, 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; and  
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 in Appendix B of this permit, shall have the meaning assigned to them in the referenced regulations.
Appendix A: INSIGNIFICANT EMISSION UNITS

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

Pursuant to ARM 17.8.1201(22)(a), an insignificant emission unit means any activity or emission unit located within a source that: (i) has a potential to emit less than 5 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 Sec. 7412 (b) of the FCAA; and (iv) is not regulated by an applicable requirement, other than a generally applicable requirement that applies to all emission units subject to Subchapter 12.

List of Insignificant Activities:

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

<table>
<thead>
<tr>
<th>Emission Unit ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEU01</td>
<td>Electric heater and motors</td>
</tr>
<tr>
<td>IEU02</td>
<td>Cooling water service and return</td>
</tr>
<tr>
<td>IEU03</td>
<td>Service and storage with &lt; 10% hydrocarbons</td>
</tr>
<tr>
<td>IEU04</td>
<td>Steam system</td>
</tr>
<tr>
<td>IEU05</td>
<td>Plant air system including but not limited to instrument air piping and air compressors</td>
</tr>
<tr>
<td>IEU06</td>
<td>Fresh water system, including but not limited to the river pumping system and boiler feedwater treatment system</td>
</tr>
<tr>
<td>IEU07</td>
<td>Crude pipelines supplying the refinery and product pipelines from the refinery</td>
</tr>
<tr>
<td>IEU08</td>
<td>Natural gas fired space heaters in buildings</td>
</tr>
<tr>
<td>IEU09</td>
<td>Tanks under pressure</td>
</tr>
<tr>
<td>IEU10</td>
<td>Any functions performed in shop areas, including but not limited to the machine shop and paint shop</td>
</tr>
<tr>
<td>IEU11</td>
<td>Any chemicals contained in spray paint, lubricants, etc.</td>
</tr>
<tr>
<td>IEU12</td>
<td>Any nuclear density gauges and measurement devices</td>
</tr>
<tr>
<td>IEU13</td>
<td>Any diesel-driven equipment such as pumps (excluding stationary fire water pump engines)</td>
</tr>
<tr>
<td>IEU14</td>
<td>Laboratory activities</td>
</tr>
<tr>
<td>IEU15</td>
<td>Air preheater during FCC startups</td>
</tr>
<tr>
<td>IEU16</td>
<td>10 kW generator</td>
</tr>
</tbody>
</table>
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 CHS;

(d) Requires changes in monitoring or reporting requirements that the Department deems to be no less stringent than current monitoring or reporting requirements;

(e) Allows for a change in ownership or operational control of a source if the Department has determined that no other change in the air quality operating permit is necessary, consistent with ARM 17.8.1225; or

(f) Incorporates any other type of change 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 emission units in a source requiring an air quality operating permit (including requirements that have been promulgated or approved by the Department or the administrator through rule making at the time of issuance of the air quality operating permit, but have future-effective compliance dates, provided that such requirements apply to sources covered under the operating permit):

(a) Any standard, rule, or other requirement, including any requirement contained in a consent decree or judicial or administrative order entered into or issued by the Department, that is contained in the Montana state implementation plan approved or promulgated by the administrator through rule making under Title I of the FCAA;

(b) Any federally enforceable term, condition or other requirement of any air quality preconstruction 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 Sec. 7411 of the FCAA, including Sec. 7411(d);

(d) Any standard or other requirement under Sec. 7412 of the FCAA, including any requirement concerning accident prevention under Sec. 7412(r)(7), but excluding the contents of any risk management plan required under Sec. 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 Sec. 7661c(b) or Sec. 7414(a)(3) of the FCAA;

(g) Any standard or other requirement governing solid waste incineration, under Sec. 7429 of the FCAA;

(h) Any standard or other requirement for consumer and commercial products, under Sec. 7511b(e) of the FCAA;

(i) Any standard or other requirement for tank vessels, under Sec. 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 Sec. 7661c(e) of the FCAA; or

(l) Any federally enforceable term or condition of any air quality open burning permit issued by the Department under Subchapter 6.

"Department" means the Montana Department of Environmental Quality.

"Emissions unit" means any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant or any pollutant listed under Sec. 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 Part 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 Sec. 112(b) of the FCAA.
"Non-federally enforceable requirement" means the following as they apply to emission units in a source requiring an air quality operating permit:

(a) Any standard, rule, or other requirement, including any requirement contained in a consent decree, or judicial or administrative order entered into or issued by the Department, that is not contained in the Montana state implementation plan approved or promulgated by the administrator through rule making under Title I of the FCAA;

(b) Any term, condition or other requirement contained in any air quality preconstruction 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 Sec. 7411 of the FCAA;

(d) Any Class I or II substance subject to a standard promulgated under or established by Title VI of the FCAA; or

(e) Any pollutant subject to a standard or other requirement established or promulgated under Sec. 7412 of the FCAA, including but not limited to the following:

(i) Any pollutant subject to requirements under Sec. 7412(j) of the FCAA. If the administrator fails to promulgate a standard by the date established in Sec. 7412(c) 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 Sec. 7412(e) of the FCAA;

(ii) Any pollutant for which the requirements of Sec. 7412(g)(2) of the FCAA have been met but only with respect to the individual source subject to Sec. 7412(g)(2) requirement.

"Responsible official" means one of the following:

(a) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall
operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

(ii) The delegation of authority to such representative is approved in advance by the Department.

(b) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

(c) For a municipality, state, federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a regional administrator of the environmental protection agency).

(d) For affected sources: the designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the FCAA or the regulations promulgated thereunder are concerned, and the designated representative for any other purposes under this subchapter.
Abbreviations:

AMP Alternative Monitoring Plan(s)
API American Petroleum Institute
ARM Administrative Rules of Montana
ASTM American Society of Testing Materials
BACT Best Available Control Technology
BTU British Thermal Unit
CEMS continuous emissions monitoring system
CERMS continuous emissions rate monitoring system
CFR Code of Federal Regulations
CO carbon monoxide
COMS continuous opacity monitoring system
CPI corrugated plate interceptor
DAF dissolved air flotation
DEQ Department of Environmental Quality
dscf dry standard cubic foot
dscfm dry standard cubic foot per minute
EEAP Emergency Episode Action Plan
EPA U.S. Environmental Protection Agency
EPA Method Test methods contained in 40 CFR 60, Appendix A
EU emissions unit
FCAA Federal Clean Air Act
FCCU Fluid Catalytic Cracking Unit
gr grains
HAP hazardous air pollutant
HDS hydrodesulphurization
IEU insignificant emissions unit
LDAR leak detection and repair
Method 5 40 CFR 60, Appendix A, Method 5
Method 9 40 CFR 60, Appendix A, Method 9
MHC mild hydrocracker
MMBtu million British Thermal Units
NOx oxides of nitrogen
NO2 nitrogen dioxide
NSR New Source Review
O2 oxygen
Pb lead
PM particulate matter
PM10 particulate matter with an aerodynamic diameter of 10 microns or less in size
PM2.5 particulate matter with an aerodynamic diameter of 2.5 microns or less in size
psi pounds per square inch
RATA relative accuracy test audit
scf standard cubic feet
SIC Source Industrial Classification
SIP State Implementation Plan
SO2 sulfur dioxide
SOX oxides of sulfur
SRP sulfur recovery plan
SRU sulfur recovery unit
TGTU  tail gas treatment unit
TGI  tail gas incinerator
TPY  tons per year
ULNB  Ultra-Low NOx Burner
ULSD  Ultra Low Sulfur Diesel
VCU  vapor combustion unit
VE  visible emissions
VOC  volatile organic compound
Appendix C: NOTIFICATION ADDRESSES

Compliance Notifications:

Montana DEQ Helena Office:
Montana Department of Environmental Quality
Air, Energy & Mining Division
Air Quality Bureau
P.O. Box 200901
Helena, MT 59620-0901

Montana DEQ Billings Office:
MT DEQ – Air Quality Bureau
Airport Industrial Park 1P-9
1371 Rimtop Dr.
Billings MT 59105-1978

Montana DEQ Butte Office:
MT DEQ – Air Quality Bureau
49 N. Main Street, Suite B
Butte, MT 59701

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

Permit Modifications:

Montana Department of Environmental Quality
Air, Energy & Mining Division
Air Quality 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 CHS, permitting authority, inspectors, and the public.

Direction to Plant: 803 Highway 212 South, Laurel, Montana, 59044

Safety Equipment Required: CHS has an extensive safety orientation package that inspectors and/or visitors must participate in.

All refinery visitors are required to sign-in at the reception desk in the administration building. They will receive either an access card for refinery entrance or a yellow tag for office visitation. Visitors that will go into the refinery are required to watch a short hazard awareness video and will be issued a hard hat, safety glasses and fire retardant clothing, if they do not have their own. Visitors must be accompanied by their refinery contact, a CHS employee or security guard at all times. Upon departure, they will return the pass and any PPE issued and log their time out.

Facility Plot Plan: An updated facility plot plan was submitted with the April 2, 2019, renewal application.
Appendix E: June 12, 1998, and March 17, 2000, Board Orders Adopting an SO$_2$ Control Plan

Although the hard copy of Appendix E has been removed from the permit, the contents of Appendix E, June 12, 1998, and March 17, 2000, Board Orders Adopting an SO$_2$ Control Plan remain as applicable requirements as stated in the Title V Operating Permit OP1821-01. To receive a hard copy of this appendix, please contact one of the following:

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

OR

CHS, Inc. – Laurel Refinery  
803 Highway 212 South  
PO Box 909  
Laurel, MT  59044-0909

The EPA SIP-approval of the SO$_2$ Emission Control Plan, dated May 2, 2002, and May 22, 2003, can be supplied by the Department, or can be obtained via the web at the following website:

http://www.epa.gov/fedrgstr/