Montana Department of
ENVIRONMENTAL QUALITY

Steve Bullock, Governor
Tracy Stone-Manning, Director

P. O. Box 200901 Helena, MT 59620-0901 (406) 444-2544 Website: www.deq.mt.gov

May 30, 2013

Patrick B. Kimmet
Refinery Manager
CHS Inc.
Laurel Refinery
P.O. Box 909
Laurel, MT 59044

RE: Final Title V Operating Permit #OP1821-11

Dear Mr. Kimmet:

The Department of Environmental Quality has prepared the enclosed Final Operating Permit #OP1821-11, for the Laurel Refinery, located in Laurel, Montana. Please review the cover page of the attached permit for information pertaining to the action taking place on Permit #OP1821-11.

If you have any questions, please contact Jenny O'Mara, the permit writer, at (406) 444-1452 or by email at jenomara@mt.gov.

Sincerely,

Julie A Merkel

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

Jenny O'Mara

Jenny O'Mara
Environmental Engineer
Air Resources Management Bureau
(406) 444-1452

JM:JO:JH
Enclosure
cc: Donald Law, US EPA Region VIII 8P-AR
Carson Coate, US EPA Region VIII, Montana Office
Greg Brown, CHS Inc. – Laurel Refinery
Karen Kennah, CHS Inc.

STATE OF MONTANA
Department of Environmental Quality
Helena, Montana 59620

AIR QUALITY OPERATING PERMIT OP1821-11

Issued to: CHS, Inc.
Laurel Refinery
802 South Highway 212
P.O. Box 909
Laurel, MT 59044

Final Date: **May 28, 2013**
Expiration Date: **October 31, 2013**

Effective Date: **May 28, 2013**
Date of Decision: **April 25, 2013**
End of EPA 45-day Review: **April 19, 2013**
Proposed Issue Date: **March 5, 2013**
Draft Issue Date: **January 15, 2013**

Application Deemed Technically Complete: **October 4, 2012**
Application Deemed Administratively Complete: **July 25, 2012**
Modification Application Received: **June 4, 2012**
AFS Number: 030-**111-0012A**

Permit Issuance and Appeal Processes: In accordance with Montana Code Annotated (MCA) Sections 75-2-217 and 218 and the Administrative Rules of Montana (ARM), ARM Title 17, Chapter 8, Subchapter 12, Operating Permit Program, this operating permit is hereby issued by the Department of Environmental Quality (Department) as effective and final on May 28, 2013. This permit must be kept on-site at the above named facility.

SECTION I. GENERAL INFORMATION 1
SECTION II. SUMMARY OF EMISSION UNITS 2
SECTION III. PERMIT CONDITIONS 4
A. FACILITY-WIDE 4
B. EU001 – PLANT-WIDE AND MULTIPLE EMITTING UNIT LIMITATIONS 9
C. EU002 – NO. 1 CRUDE UNIT AND NAPHTHA SPLITTER 23
D. EU003 – NO. 2 CRUDE UNIT 25
E. EU004 – PDA UNIT – SHUTDOWN 27
F. EU005 –NAPHTHA HYDROTREATING UNIT 27
G. EU006 – MIDDLE DISTILLATE UNIFINER - *SHUTDOWN* 30
H. EU007 – PLATFORMER UNIT, INCLUDING THE BENZENE REDUCTION UNIT 30
I. EU008 – FLUID CATALYTIC CRACKING (FCC) UNIT 35
J. EU009 – ALKYLATION/BUTAMER/MEROX/SATURATE UNITS 47
K. EU010 – HYDRODESULFURIZATION (HDS) UNIT (FUTURE MILD HYDROCRACKER) AND 100 UNIT HYDROGEN PLANT 49
L. EU011 – ZONE D SULFUR RECOVERY UNIT (SRU) 58
M. EU012 – ZONE A SULFUR RECOVERY UNIT (SRU) 63
N. EU013 – STEAM GENERATION UNITS 70
O. EU014 – TANK FARM (NON-WASTEWATER) 78
P. EU015– TRANSFER FACILITIES 84
Q. EU016 – WASTEWATER TREATMENT UNITS 91
R. EU017 – FLARE SYSTEMS 94
S. EU018 – RCRA UNITS 96
T. EU019 – COOLING TOWERS 97
U. EU020 – SATURATE GAS CONCENTRATION UNIT – *COMBINED WITH EU002* 98
V. EU021 – ULSD UNIT (900 UNIT) AND HYDROGEN PLANT (1000 UNIT) 98
W. EU022 – DELAYED COKER UNIT 106
X. EU023 – ZONE E SRU/TGTU/TGI 113
SECTION IV. NON-APPLICABLE REQUIREMENTS 118
A. FACILITY-WIDE 118
B. EMISSION UNITS 119
SECTION V. GENERAL PERMIT CONDITIONS 120
A. COMPLIANCE REQUIREMENTS 120
B. CERTIFICATION REQUIREMENTS 120
C. PERMIT SHIELD 121
D. MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS 122
E. PROMPT DEVIATION REPORTING 123
F. EMERGENCY PROVISIONS 123
G. INSPECTION AND ENTRY 124
H. FEE PAYMENT 124
I. MINOR PERMIT MODIFICATIONS 124
J. CHANGES NOT REQUIRING PERMIT REVISION 125
K. SIGNIFICANT PERMIT MODIFICATIONS 126
L. REOPENING FOR CAUSE 126
M. PERMIT EXPIRATION AND RENEWAL 127
N. SEVERABILITY CLAUSE 127
O. TRANSFER OR ASSIGNMENT OF OWNERSHIP 127
P. EMISSIONS TRADING, MARKETABLE PERMITS, ECONOMIC INCENTIVES 127

Q. NO PROPERTY RIGHTS CONVEYED 128
R. TESTING REQUIREMENTS 128
S. SOURCE TESTING PROTOCOL 128
T. MALFUNCTIONS 128
U. CIRCUMVENTION 128
V. MOTOR VEHICLES 128
W. ANNUAL EMISSIONS INVENTORY 128
X. OPEN BURNING 128
Y. MONTANA AIR QUALITY PERMITS 128
Z. NATIONAL EMISSION STANDARD FOR ASBESTOS 129
AA. ASBESTOS 129
BB. STRATOSPHERIC OZONE PROTECTION – SERVICING OF MOTOR VEHICLE AIR CONDITIONERS 130
CC. STRATOSPHERIC OZONE PROTECTION – RECYCLING AND EMISSION REDUCTIONS 130
DD. EMERGENCY EPISODE PLAN 130
EE. DEFINITIONS 130
APPENDICES 131
Appendix A. INSIGNIFICANT EMISSION UNITS A-1
Appendix B. DEFINITIONS and ABBREVIATIONS B-1
Appendix C. NOTIFICATION ADDRESSES C-1
Appendix D. AIR QUALITY INSPECTOR INFORMATION D-1
Appendix E. June 12, 1998, and March 17, 2000, Board Orders Adopting an SO_2 Control Plan E-1
Appendix F. Summary of Terms and Conditions from the Consent Decree F-1

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

SECTION I. GENERAL INFORMATION

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

Company Name: **CHS, Inc.**

Mailing Address: **P.O. Box 909, 802 South Highway 212**

City: **Laurel** State: **Montana** Zip: **59044-0909**

Plant Location: **S ½, Section 16, Township 2 South, Range 24 East, Yellowstone County**

Responsible Official: **Patrick B. Kimmet** Phone: **(406) 628-5200**

Alternate Responsible Official: **Gregory L. Brown** Phone: **(406) 628-5256**

Facility Contact Person: **Gregory L. Brown** Phone: **(406) 628-5256**

Primary SIC Code: **2911**

Nature of Business: **Petroleum Refining**

Description of Process: CHS operates a petroleum refinery in Laurel, MT. 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:

1. Crude Units and Naphtha Splitter
2. Naphtha Hydrotreaters (NHT) (*previously Unifiners*)
3. Platformer (=Naphtha Reformer)
4. Fluidized Catalytic Cracking (FCC) Unit
5. Alkylation/Butamer/Merox/Saturate Units
6. Hydrodesulfurization (HDS) Unit and Hydrogen Plant
7. Four Sulfur Recovery Units (SRUs) with Three Tailgas Treatment Units (TGTUs)
8. Ultralow Sulfur Diesel Unit and Hydrogen Plant
9. Delayed Coker Unit
10. Benzene Reduction Unit
11. Transfer Facilities (Truck Product Loading, Railcar Product Loading)

SECTION II. SUMMARY OF EMISSION UNITS

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

Emission Unit ID	Description	Pollution Control Device/Practice
EU001	Plant-wide and Multiple Emitting Unit Limitations	MAQP #1821-28 Limits, Billings/ Laurel SO_2 Stipulation, and MACT LDAR program, where applicable. CEMS on Refinery Fuel Gas Header(s).
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)	LDAR, Billings/ Laurel SO_2 Stipulation
EU003	#2 Crude Unit • #2 Crude Unit Main Heater (2CV-HTR-1) • #2 Crude Unit Vacuum Heater (2CV-HTR-2)	LDAR, Billings/ Laurel SO_2 Stipulation
EU004	PDA Unit – *SHUT DOWN*	
EU005	Naphtha Hydrotreater Unit • NHT Charge Heater (H-8301) • NHT Reboiler Heater #1 (H-8302) • NHT Reboiler Heater #2 (H-8303) • NHT Splitter Reboiler Heater (H-8304)	LDAR, Billings/ Laurel SO_2 Stipulation
EU006	Middle Distillate Unifiner – *SHUT DOWN*	
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) • Platformer Recycle Compressor Turbine (C-4772) • Benzene Reduction Unit Oily Water Sewer	LDAR, Billings/ Laurel SO_2 Stipulation, Low NO_x technology (Platformer Heater and Platformer Splitter Reboiler), NSPS Subpart QQQ
EU008	Fluid Catalytic Cracking (FCC) Unit • FCC Charge Heater (FCC-Heater-1) • FCC Charge Heater (FCC-Heater-NEW) • FCC Regenerator (FCC-VSSL-1)	LDAR, SO_2 CEMS, Low NOx Technology (on heater), Billings/ Laurel SO_2 Stipulation
EU009	Alkylation/Butamer/Merox/Saturate Units • Alkylation Unit Hot Oil Belt Heater (ALKY-HTR-1) • Miscellaneous Process Vent (Alkylation Unit Butamer Stabilizer Offgas)	LDAR, Billings/ Laurel SO_2 Stipulation
EU010	Hydrodesulfurization Unit and Hydrogen Plant (100 Unit) • Reformer Heater (H-101) • Reformer Heater (H-102) • Reactor Charge Heater (H-201) • Fractionator Feed Heater (H-202) • Hydrogen Compressor Gas Engine (C-201B)	LDAR, MAQP #1821-28 Limits, Low NO_x Technology (on heaters), Billings/ Laurel SO_2 Stipulation
EU011	Zone D SRU and TGTU • SRU Reheater (E-407) • Incinerator (INC-401)	MAQP #1821-28 Limits, Low NO_x Technology, SO_2 CEMS, Billings/ Laurel SO_2 Stipulation
EU012	Zone A SRU and TGTU • #1 SRU Incinerator (SRU-AUX-4)	SO_2 CEMS, Billings/ Laurel SO_2 Stipulation

Emission Unit ID	Description	Pollution Control Device/Practice
EU013	Steam Generation Units • #1 Fuel Oil Heater (CV-HTR-9) • #4 Boiler • #5 Boiler • #9 Boiler • Boiler #10 • Boiler #11 • Boiler #12	MAQP #1821-28 Limits Fuel Oil Flow Meters (#4 and #5 Boilers) LDAR and Low NO_x Technology (Boilers #10, #11, and #12), Billings/ Laurel SO_2 Stipulation
EU014	Tank Farm (non-Wastewater): • *MACT Group 1 Storage Vessels* • *MACT Group 2 Storage Vessels* • *Exempt – pressure vessels* • *Exempt – not organic HAP* • *Exempt – not refining*	Internal and External Floating Roofs, Fixed Roofs, LDAR (as applicable)
EU015	Transfer Facilities • Asphalt Loading Heater #1 • Truck Product Loading Rack Vapor Combustion Unit (VCU) • New Truck Product Loading Rack Vapor Combustion Unit (VCU) • Railcar Product Loading Rack VCU	VCU on Light Product Truck Loading Racks and Railcar Loading Rack, LDAR, Billings/ Laurel SO_2 Stipulation
EU016	Wastewater Treatment Units • Wastewater Treatment Unit (old) • Wastewater Treatment Unit (new) • Tanks: Tank 23, Tank 25, Tank 44, Tank 118, Tank 119, Tank 128, and Tank 129 • Desalter Wastewater Three-Phase Separator(s), API Separator(s), CPI Separator(s), Dissolved Air Flotation (DAF) Units • New Wastewater Treatment Unit Vessels	Enclosed conveyance and other wastewater controls for affected equipment per NSPS QQQ, NSPS Kb (as applicable)
EU017	Flare Systems • Refinery Flare (FL-7202) • Zone E Coker Flare (FL-7201)	Flare, Billings/ Laurel SO_2 Stipulation
EU018	RCRA Units	Restrictions on Land Tillage (HSWA permit)
EU019	Cooling Towers • Cooling Towers #1 - #3 • Cooling Tower #5 • Cooling Tower #6	None
EU020	Saturate Gas Concentration Unit – *Eliminate EU, 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)	LDAR
EU022	Delayed Coker Unit • Coker Charge Heater (H-7501) • Coke Processing Operations	LDAR, reasonable precautions for coke processing
EU023	Zone E SRU and TGTU	LDAR

SECTION III. PERMIT CONDITIONS

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

A. Facility-Wide

Conditions	Rule Citation	Rule Description	Pollutant/Parameter	Limit
A.1	ARM 17.8.105	Testing Requirements	Testing Requirements	-------
A.2	ARM 17.8.106	Source Testing Protocol	Testing, Record keeping, and Reporting Requirements	-------
A.3	ARM 17.8.304(1)	Visible Air Contaminants	Opacity	40%
A.4	ARM 17.8.304(2)	Visible Air Contaminants	Opacity	20%
A.5	ARM 17.8.304(3)	Visible Air Contaminants	Opacity	60%
A.6	ARM 17.8.308(1)	Particulate Matter, Airborne	Fugitive Opacity	20%
A.7	ARM 17.8.308(2)	Particulate Matter, Airborne	Reasonable Precautions	-------
A.8	ARM 17.8.308(3)	Particulate Matter, Airborne	Reasonable Precaution, Construction	20%
A.9	ARM 17.8.309	Particulate Matter, Fuel Burning Equipment	Particulate Matter	$E = 0.882 * H^{-0.1664}$ Or $E = 1.026 * H^{-0.233}$
A.10	ARM 17.8.310	Particulate Matter, Industrial Processes	Particulate Matter	$E = 4.10 * P^{0.67}$ or $E = 55 * P^{0.11} - 40$
A.11	ARM 17.8.322(4) and 1979 State Implementation Plan (SIP)	Sulfur Oxide Emissions, Sulfur in Fuel, Plant-wide	Sulfur in Fuel (liquid or solid fuels)	1 lb/MMBtu fired
A.12	ARM 17.8.322(5) and 1979 SIP	Sulfur Oxide Emissions, Sulfur in Fuel, Plant-wide	Sulfur in Fuel (gaseous)	50 gr/100 CF
A.13	ARM 17.8.322(5)	Sulfur Oxide Emissions, Sulfur in Fuel	Sulfur in Fuel (gaseous)	50 gr/100 CF
A.14	ARM 17.8.324(3)	Hydrocarbon Emissions, Petroleum Products	Gasoline Storage Tanks	-------
A.15	ARM 17.8.324(1)	Hydrocarbon Emissions, Petroleum Products	65,000-Gallon Capacity	-------
A.16	ARM 17.8.324(2)	Hydrocarbon Emissions, Petroleum Products	Oil-effluent Water Separator	-------
A.17	ARM 17.8.341	National Emission Standards for Benzene Waste Operations	All Applicable Provisions of 40 CFR 61 Subpart FF	-------
A.18	ARM 17.8.342	NESHAPs General Provisions	SSM Plans	Submittal
A.19	ARM 17.8.615	Firefighting Training Permit	Firefighting Requirements	
A.20	ARM 17.74.336	Asbestos	Asbestos	-------
A.21	40 CFR Part 68	Chemical Accident Prevention	Risk Management Plan	-------
A.22, A.23	40 CFR Part 51	SIP	SO_2	-------
A.24	40 CFR Part 51	SIP	Sulfur Bearing Gases	-------
A.25	40 CFR Part 51	SIP	Quantify Emissions	-------
A.26, A.27	40 CFR Part 51	SIP	Reporting Requirements	-------
A.28	ARM 17.8.1212	Reporting Requirements	Compliance Monitoring	-------
A.29	ARM 17.8.1207	Reporting Requirements	Annual Certification	-------

Conditions

A.1. Pursuant to ARM 17.8.105, any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall

conduct test, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

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

A.2. Pursuant to ARM 17.8.106, all emission source testing, sampling and data collection, recording analysis, and transmittal must be performed, maintained, and reported in accordance with the Montana Source Test Protocol and Procedures Manual (dated July 1994 unless superseded by rulemaking), unless alternate methods are approved by the Department.

A.3. Pursuant to ARM 17.8.304(1), 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 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):
$E = 0.882 * H^{-0.1664}$

For new fuel burning equipment (installed on or after November 23, 1968):
$E = 1.026 * H^{-0.233}$

Where H is the heat input capacity in million BTU (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:
$E = 4.10 * P^{0.67}$

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

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

A.11. Pursuant to ARM 17.8.322(4), CHS shall not burn liquid or solid fuels containing sulfur in excess of 1 pound per million BTU fired, unless otherwise specified by rule or in this permit. This rule shall be interpreted to mean that no person shall burn solid, liquid, or gaseous fuels such that the aggregate sulfur content of all fuels burned within a plant during any day exceeds 1 pound of sulfur per million BTU fired. The rule shall be interpreted to allow for a daily deviation of 0.1 pound of sulfur per million BTU fired. The rule shall be interpreted to allow the blending of all fuels burned in a plant during a given time period in determining the aggregate sulfur content for purposes of the rule, and it shall not be construed to require blending or physical mixing of fuels at any given furnace or heater within the plant complex (EPA-approved SIP, September 1979).

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 million BTU fired. The rule shall be interpreted to allow for a daily deviation of 0.1 pound of sulfur per million BTU fired. The rule shall be interpreted to allow the blending of all fuels burned in a plant during a given time period in determining the aggregate sulfur content for purposes of the rule, and it shall not be construed to require blending or physical mixing of fuels at any given furnace or heater within the plant complex (EPA-approved SIP, September 1979).

A.13. 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.17. CHS shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements as required by 40 CFR 61, Subpart FF-National Emissions Standards for Benzene Waste Operations (ARM 17.8.341 and 40 CFR 61, Subpart FF).

A.18. Pursuant to ARM 17.8.342 and 40 CFR Part 63.6, CHS shall submit to the Department a copy of any startup, shutdown, and malfunction (SSM) plan required under 40 CFR 63.6(e)(3) within 30 days of the effective date of this operating permit (if not previously submitted), within 30 days of the compliance date of any new National Emission Standard for Hazardous Air Pollutants (NESHAPs) or Maximum Achievable Control Technology (MACT) standard, and within 30 days of the revision of any such SSM plan, when applicable. The Department requests submittal of such plans in electronic form, when possible.

A.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. Pursuant to ARM 17.74.336, CHS shall comply with all the limitations and requirements of their Asbestos Abatement Annual Permit #MTF09-0005.

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 F 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 F 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 SO_2 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

Reporting

A.26. CHS shall comply with all reporting requirements of Exhibit A and Attachment 1 of the plan (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

A.27. 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.28. 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.29. 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 – Plant-wide and Multiple Emitting Unit Limitations

1. Plant-wide Limitations:

a. Plant-Wide Applicability Limit (PAL) – Plant-wide refinery limits (excepting the refinery flare & coker flare).

b. Plant-Wide Refinery Fuel Gas (RFG) Combustion Device Limitations (40 CFR 60, Subpart J) - Includes plant-wide RFG combustion device requirements for heaters and the coker flare, as well as the refinery flare after approval/disapproval of the Alternative Monitoring Plans (AMPs). 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 H_2S monitoring.

2. 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):

a. Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003

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),
- Reformer Heater (H-102),
- 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), #4 boiler, #5 boiler, #9 boiler, and #1 asphalt loading heater

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

- Boiler #10

b. 1979 Stipulation - Sulfur in fuel rule applicable sources (per the 1979 Stipulation, this applies to the facility, not unit by unit). See Section A. for 1979 SIP sulfur-in-fuel requirements.

c. CHS Consent Decree – Heaters, boilers, and compressors (as defined in Consent Decree)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirement
B.1, B.16, B.17, B.32, B.33, B.37, B.39, B.40	Plant-wide: SO_2	2,980.3 ton/yr	Logging	Ongoing	Quarterly
B.2, B.16, B.17, B.32, B.33, B.37, B.39, B.40	Plant-wide: NO_x	999.4 ton/yr	Logging	Ongoing	
B.3, B.16, B.17, B.32, B.33, B.37, B.39, B.40	Plant-wide: CO	678.2 ton/yr	Logging	Ongoing	
B.4, B.16, B.17, B.18, B.32, B.33, B.37, B.39, B.40	Plant-wide: VOC	1,967.5 ton/yr	Logging	Ongoing	
B.5, B.16, B.17, B.32, B.33, B.37, B.39, B.40	Plant-wide: PM-10	152.2 ton/yr	Logging	Ongoing	
B.6, B.16, B.17, B.32, B.33, B.37, B.39, B.40	Plant-wide: PM	162.2 ton/yr	Logging	Ongoing	
B.7, B.17, B.19, B.22, B.23, B.25, B.27-B.30, B.31, B.33, B.35, B.36, B.38-B.40	SIP: SO_2 for listed fuel gas burning sources only	3,014.7 lb/3-hour Period	SO_2/H_2S CEMS, Sampling	Ongoing	
			Method 11	Annually	Semi-annual
B.8, B.17, B.19, B.20, B.22, B.23, B.25, B.27-B.30, B.31, B.33, B.35, B.36, B.38-B.40	SIP: SO_2 for listed fuel gas burning sources only	24,117.6 lb/ Calendar Day	SO_2/H_2S CEMS, Sampling	Ongoing	Quarterly
			Method 11	Annually	Semi-annual
B.9, B.17, B.19, B.22, B.23, B.25, B.27-B.30, B.31, B.33, B.35, B.36, B.38-B.40	SIP: SO_2 for listed fuel gas burning sources only	8,802,924 lb/ Calendar Year	SO_2/H_2S CEMS, Sampling	Ongoing	Quarterly
			Method 11	Annually	Semi-annual
B.10, B.16, B.17, B.27-B.30, B.31, B.33, B.35- B.37, B.39, B.40	SO_2 emissions from the combustion of alkylation unit polymer	Prior to startup of Boiler #12: 127.6 tons/rolling 365-day Following startup of Boiler #12: 50 tons/rolling 365-day	SO_2/H_2S CEMS, Sampling	Ongoing	
			Method 11	Annually	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirement
B.11, B.20, B.21 - B.23, B.28, B.33, B.35- B.37, B.39, B.40	Refinery Fuel Gas	40 CFR 60, Subpart J	Subpart J	Subpart J	Semi-annual
B.12, B.21, B.22, B.23, B.24, B.27, B.28, B.29, B.31, B.33, B.35- B.37, B.39, B.40	H_2S in Refinery Fuel Gas	0.10 gr/dscf (161 ppm_{vd}) / 3-hour average and 0.05 gr/dscf (81 ppm_{vd}) / 12-month average	H_2S CEMS	Ongoing	Semi-annual
			Method 11	Annually	
B.17, B.19, B.21, B.22, B.23, B.24, B.27 - B.29, B.31, B.33, B.35- B.37, B.39, B.40	H_2S CEMS	Operate and Maintain	40 CFR 60, Appendix F	On-going	Semi-annual
			RATA	Annually	
B.17, B.19, B.22, B.25, B.26, B.27- B.29, B.33, B.35, B.37, B.39, B.40	Continuous Refinery Fuel Gas Flow Rate Monitor	Operate and Maintain	Accuracy Determinations	At Least Once Every 48 Months	
B.13, B.33, B.39, B.40	Sour Water Stripper Overhead (SWSOH)	Prohibit combusting SWSOH in any fuel gas combustion device	Certify	Semi-annual	Semi-annual
B.14, B.30, B.34, B.39, B.40	Reduce the overall NOx emissions from the Controlled Heaters, Boilers and Compressors in an amount greater than or equal to 265 tons per year	Per Consent Decree	Per Consent Decree	Per Consent Decree	Semi-annual
B.15, B.30, B.34, B.39, B.40	Installed NOx controls on at least 30% of the heater and boiler capacity greater than 40 mmBTU per hour	Per Consent Decree	Per Consent Decree	Per Consent Decree	Semi-annual

Conditions

B.1. Annual plant-wide emission limitation: SO_2 emissions shall not exceed 2980.3 tons per year (ARM 17.8.749).

B.2. Annual plant-wide emission limitation: NO_x emissions shall not exceed 999.4 tons per year (ARM 17.8.749).

B.3. Annual plant-wide emission limitation: CO emissions shall not exceed 678.2 tons per year (ARM 17.8.749).

B.4. Annual plant-wide emission limitation: VOC emissions shall not exceed 1967.5 tons per year (ARM 17.8.749).

B.5. Annual plant-wide emission limitation: PM-10 emissions shall not exceed 152.2 tons per year (ARM 17.8.749).

B.6. Annual plant-wide emission limitation: PM emissions shall not exceed 162.2 tons per year (ARM 17.8.749).

B.7. CHS shall not cause or authorize total SO_2 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 22, 2003).

B.8. CHS shall not cause or authorize total SO_2 emissions from refinery combustion sources and fuel gas-fired sources to exceed the limit of 24,117.6 pounds per calendar day (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 22, 2003).

B.9. CHS shall not cause or authorize total SO_2 emissions from refinery combustion sources and fuel gas-fired sources to exceed the limit of 8,802,924 pounds per calendar year (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 22, 2003).

B.10. SO_2 emissions from the combustion of alkylation unit polymer is limited to 50 tons per rolling 365-day time period (ARM 17.8.749). Periods of natural gas curtailment are not exempt from this limit.

B.11. CHS shall comply with all applicable requirements of 40 CFR 60, Subpart J-Standards of Performance for Petroleum Refineries, as it applies to fuel gas combustion devices (ARM 17.8.340 and 40 CFR 60, Subpart J). The Refinery Flare shall become subject to 40 CFR 60, Subpart J on the date of the last Approval or 120 days after the last Disapproval of the Alternative Monitoring Plans (AMP) required by the Consent Decree to be submitted by June 30, 2004 (CHS Consent Decree).

B.12. CHS shall not cause or authorize hydrogen sulfide (H_2S) in refinery fuel gas burned in fuel combustion devices to exceed 0.10 grains of H_2S per dry standard cubic foot (161 parts per million, volumetric dry (ppm_{vd}) H_2S) per rolling 3-hour average or 0.05 grains of H_2S per dry standard cubic foot (81 ppm_{vd} H_2S) per 12-month average (ARM 17.8.749 and 40 CFR 60, Subpart J).

B.13. CHS shall not burn old sour water stripper overhead (SWSOH) in any fuel gas combustion device. The prohibition on burning SWSOH eliminates the SIP-mandated SWSOH limits and monitoring requirements (ARM 17.8.749).

B.14. By December 31, 2011, CHS shall complete a program to reduce the overall NOx emissions from the Controlled Heaters, Boilers and Compressors in an amount greater than or equal to 265 tons per year as demonstrated by the inequality in Paragraph 44 of the Consent Decree. To achieve this reduction, CHS shall control NOx emissions from the Controlled Heaters, Boilers and Compressors through the use of one or any combination of the following NOx control technologies: the permanent shutdown of certain units with the revocation of their operating permits, installation of Selective Catalytic Reduction (SCR), installation of Selective Non-Catalytic Reduction (SNCR), installation of current or next generation ultra-low NOx burners, and/or installation of technologies that CHS demonstrates to EPA's satisfaction will reduce NOx emissions to 0.040 lbs per mmBTU or lower. To demonstrate compliance, CHS must submit a complete and timely application for the appropriate permit, permit modification, and/or permit waiver for enforceable limits that will achieve the required reductions (CHS Consent Decree).

B.15. By December 31, 2011, CHS shall have installed NOx controls on at least 30% of the heater and boiler capacity greater than 40 MMBtu/hr located at the Laurel Refinery. The heater and boiler capacity shall be based on the maximum Heat Input Capacity as an average of calendar years 2000 and 2001 as listed in Appendix A of the Consent Decree. CHS may include in the 30% capacity demonstration those heaters, boilers and compressors which have been either shut down, or for which the refinery has installed one of the following NOx control technologies: SCR, SNCR, current or next generation ultra-low NOx burners, or technologies that CHS demonstrates to EPA's satisfaction will reduce NOx emissions to 0.040 lbs per mmBTU or lower. To demonstrate compliance, CHS must submit a complete and timely application for the appropriate permit, permit modification, and/or permit waiver for enforceable limits that will achieve the required reductions (CHS Consent Decree).

Compliance Demonstration

B.16. CHS will monitor compliance with the annual plant-wide emission 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). The units included in each source type are listed in Section II.A of the Technical Review Document (TRD) (ARM 17.8.749).

1. Gas fired external combustion

   a. SO_2

      i. Calculation Basis: AP-42 Section 1-4 (7/98 revision) and complete conversion of fuel gas H_2S to SO_2
      ii. Key Parameters: Monthly fuel use (scf) per combustion unit and refinery fuel gas H_2S content from CEMS.

   b. NO_x, CO, PM_{10}/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. Fuel oil fired external combustion

   a. SO_2

      i. Calculation Basis: Methodology required in the Billings-Laurel SO_2 SIP and Appendix G of the CHS Consent Decree.
      ii. Key Parameters: Sulfur content and specific gravity of alkylation unit polymer pursuant to Appendix G of the CHS Consent Decree.

3. Gas fired internal combustion

   a. SO_2

      i. Calculation Basis: AP-42 Section 1-4 (7/98 revision) and complete conversion of fuel gas H_2S to SO_2
      ii. Key Parameters: Monthly fuel use (scf) per combustion unit and fuel gas H_2S and Sulfur content

b. NO_x, 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. PM_{10}/PM: Not applicable – not a significant source

d. VOC

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

4. Boiler #10

a. SO_2

i. Calculation Basis: Complete conversion of fuel gas H_2S to SO_2
ii. Key Parameters: Monthly fuel use (scf) per combustion unit and refinery fuel gas H_2S content from CEMS

b. NO_x

i. Calculation Basis: NO_x and O_2 CEMS, Emission factors based on stack tests
ii. Key Parameters: NO_x and O_2 CEMS, Reference Method 19, NO_x stack tests, monthly fuel use (scf)

c. CO

i. Calculation Basis: Emission factors based on stack tests
ii. Key Parameters: CO stack tests, monthly fuel use (scf)

d. PM_{10}/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. VOC

i. Calculation Basis: Emission factors based on stack tests
ii. Key Parameters: VOC stack tests, monthly fuel use (scf)

5. Zone D, ULSD Unit (900 Unit), Hydrogen Plant (1000 Unit), Delayed Coker Unit combustion sources, Boiler #11, and NHT Charge Heater (H-8301)

a. SO_2: Calculation Basis: CEMS data and methodology required in the Billings/Laurel SO_2 SIP

b. NO_x

i. Calculation Basis: NO_x and O_2 CEMS, Emission factors based on annual stack tests
ii. Key Parameters: NO_x stack tests, monthly fuel use (scf) per combustion unit

c. CO

i. Calculation Basis: CO and O_2 CEMS, Emission factors based on annual stack tests
ii. Key Parameters: CO stack tests, monthly fuel use (scf) per combustion unit

d. PM_{10}/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 annual 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

6. Fugitive equipment leaks

a. SO_2, NO_x, CO, PM_{10}/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

7. Boiler #12

a. SO_2

i. Calculation Basis: Complete conversion of fuel gas H_2S to SO_2
ii. Key Parameters: Monthly fuel use (scf) per combustion unit and refinery fuel gas H_2S content from CEMS

b. NO_x

i. Calculation Basis: NO_x and O_2 CEMS, Volumetric stack flow rate monitor, Emission factors based on stack tests
ii. Key Parameters: NO_x and O_2 CEMS, Reference Method 19, NO_x stack tests, monthly fuel use (scf), volumetric stack flow rate

c. CO

i. Calculation Basis: CO and O_2 CEMS, Emission factors based on stack tests
ii. Key Parameters: CO stack tests, monthly fuel use (scf)

d. PM_{10}/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. VOC

i. Calculation Basis: Emission factors based on stack tests
ii. Key Parameters: VOC stack tests, monthly fuel use (scf)

8. FCCU

a. SO_2: Calculation Basis: CEMS data and methodology required in CHS Consent Decree, NSPS Subpart J, and the Billings/Laurel SO_2 SIP

b. NO_x: 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. PM_{10}/PM

i. Calculation Basis: Annual stack test results
ii. Key Parameters: Monthly FCC 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 FCC charge rate (bbl)

9. Zone A SRU Incinerator

a. SO_2: Calculation Basis: CEMS data and methodology required in Billings/Laurel SO_2 SIP

b. NO_x

i. Calculation Basis: Emission factors based on every 5-year stack tests
ii. Key Parameters: Every five-year NO_x stack test, monthly fuel use (scf)

c. CO, PM_{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

10. Zone D SRU Incinerator

a. SO_2: Calculation Basis: CEMS data and methodology required in Billings/Laurel SO_2 SIP

b. NO_x

i. Calculation Basis: Emission factors based on annual stack tests
ii. Key Parameters: Annual NO_x stack test, monthly fuel use (scf)

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

11. Zone E SRU Incinerator

a. SO_2: Calculation Basis: CEMS data and methodology required in Billings/Laurel SO_2 SIP

b. NO_x

i. Calculation Basis: Emission factors based on every 5-year stack tests
ii. Key Parameters: Every five-year NO_x stack test, monthly fuel use (scf)

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

12. Wastewater

a. SO_2, NO_x, CO, PM_{10}/PM: Not applicable – not a source

b. 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)

13. Cooling towers

a. SO_2, NO_x, CO: Not applicable – not a source

b. PM_{10}/PM: Cooling tower design (Delayed coker unit cooling tower applicable)

c. VOC

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

14. Loading facilities

a. SO_2: Not applicable – not a source

b. NO_x

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

c. CO

i. Calculation Basis: VCU stack tests for lb CO/gal loaded

ii. Key Parameters: Monthly volume of materials loaded from yield accounting

d. PM_{10}/PM: Not applicable – not a significant source

e. 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.)

15. Storage tanks

a. SO_2, NO_x, CO, PM_{10}/PM: Not applicable – not a source

b. VOC

i. Calculation Basis: EPA TANKS
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.17. In addition to the testing required in each section, compliance monitoring for the emission limits applicable to the fuel gas and fuel oil 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.18. Firing these units solely on natural gas shall monitor compliance with the applicable VOC limits (ARM 17.8.749).

B.19. Compliance with the SIP SO_2 emission limitations contained in Section III.B.7, 8, and 9 shall be monitored by summing the hourly SO_2 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, 8, and 9 applies) determined in accordance with Exhibit A, Section 6(F).

The hourly SO_2 emission rate for the listed fuel gas combustion units shall be determined by using the H_2S 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002 and May 22, 2003).

B.20. 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.21. CHS shall operate and maintain a continuous H_2S concentration monitor(s) (dry basis), including a data acquisition system, to monitor and record the H_2S 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_2/O_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_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.22. Compliance monitoring for SO_2 limits for refinery fuel gas-fired units shall be based upon monitor data for H_2S, as required in Section III.B.21 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_2/O_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_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.23. Certification of the H_2S 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_2S concentrations and fuel gas flow rates measured by the CEMS where otherwise required (ARM 17.8.1213 and Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.24. Within 4 hours of the initial determination that the H_2S 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_2S concentration (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.25. 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_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.26. 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_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

B.27. CEM systems are to be in operation at all times when the emission units are operating, except for quality assurance and control checks, breakdowns and repairs. In the event the primary CEM system is unable to meet minimum availability requirements, 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.28. 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.29. All gaseous (SO_2 and H_2S) 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

a. For the FCC Regenerator stack SO_2 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 H_2S 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 H_2S concentration and refinery fuel gas flow rate monitors of at least 94%.

B.30. CHS shall monitor compliance with CHS Consent Decree provisions in accordance with applicable CHS Consent Decree requirements (CHS Consent Decree and ARM 17.8.1213).

Record keeping

B.31. All source test record keeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

B.32. CHS shall complete the record keeping as required by Section III.B.16 (compliance monitoring for annual plant-wide emission limits) (ARM 17.8.1212).

B.33. CHS shall maintain, under CHS's control, all records required for compliance demonstration as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

B.34. CHS shall perform recordkeeping with respect to the CHS Consent Decree provisions in accordance with applicable CHS Consent Decree requirements (CHS Consent Decree and ARM 17.8.1212).

Reporting

B.35. 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.36. 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).

B.37. CHS shall submit quarterly emission reports to the Department within 30 days of the end of each calendar quarter. Copies of the emission reports shall be submitted to both the Billings regional office and the Helena office of the Department. The report shall include the following (ARM 17.8.749):

a. Compliance with plant-wide emission limits using data required in Section III.B.14;

b. SO_2 emission rates for the combustion of fuel oil and alkylation unit polymer, reported as daily 365-day rolling average (tons/year) for each calendar day for the quarter;

c. 24-hour (daily) average concentration of H_2S in the refinery fuel gas burned at the permitted facilities;

d. Unit operating times during the reporting period;

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

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

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

h. 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

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

B.38. 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 Billings Regional Office. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002 and May 22, 2003).

B.39. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

B.40. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of the results of any source tests performed during the reporting period;

b. Certification of compliance with emission limits and that quarterly reports were submitted as required by Section III.B.33;

c. Certification of compliance with Stipulation limits and that quarterly reports were submitted as required by Section III.B.34;

d. Certification of compliance with applicable requirements for 40 CFR 60, Subpart J (refinery fuel gas combustion);

e. Certification of compliance with prohibition on burning SWSOH contained in Section III.B.13; and

f. Certification of compliance with applicable requirements of CHS Consent Decree, including any reporting requirements.

C. EU002 – No. 1 Crude Unit and Naphtha Splitter

No. 1 Crude Unit Preheater (CV-HTR-1), No. 1 Crude Unit Main Heater (CV-HTR-2), and No. 1 Crude Unit Vacuum Heater (CV-HTR-4).

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirement
C.1, C.8, C.12, C.15-C.18	No. 1 Crude Unit - Opacity	40%	Method 9	As Required by the Department and Section III.A.1	Semi-annual
C.2, C.8, C.12, C.15-C.18	Naphtha Splitter - Opacity	20%	Method 9	As Required by the Department and Section III.A.1	Semi-annual
C.3, C.7, C.9, C.11, C.13, C.15, C.17, C.18	No. 1 Crude Unit - Equipment Leaks	40 CFR 60, Subpart GGG	Subpart VV	Subpart VV	Semi-annual
C.4, C.10, C.14, C.15, C.17, C.18	No. 1 Crude Unit & No.1 Crude Unit Revamp Project - Equipment Leaks	40 CFR 60, Subpart VVa - Monitoring and Maintenance program or LDAR program	40 CFR 60, Subpart VVa, 40 CFR 60, Subpart GGGa	40 CFR 60, Subpart VVa, 40 CFR 60, Subpart GGGa	Semi-Annual
C.5, C.7, C.9, C.11, C.13, C.15, C.17, C.18	Equipment Leaks	40 CFR 63, Subpart CC	Subpart VV	Subpart VV	Semi-annual
C.6, C.7, C.9, C.11, C.13, C.15, C.17, C.18	Equipment Leaks	Monitoring and Maintenance Plan	Log	During Performance of Program	Semi-annual
C.6, C.7, C.9, C.11, C.13, C.15, C.17, C.18	Equipment Leaks of HAP and Non-HAP VOC	Leak Detection and Repair (LDAR) Program	Log	During Performance of Program	Semi-annual

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 GGG - Standards of Performance for 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 VV applies to the No. 1 Crude Unit fugitive piping equipment in VOC service as appropriate (ARM 17.8.340; 40 CFR 60, Subpart GGG; and 40 CFR 60, Subpart VV).

C.4. 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 VVa applies to the No. 1 Crude Unit fugitive piping equipment in VOC service as appropriate (ARM 17.8.340; 40 CFR 60, Subpart GGGa; and 40 CFR 60, Subpart VVa).

C.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 VV applies to the various pumps, valves, flanges, and other equipment in organic Hazardous Air Pollutant (HAP) service within the No. 1 Crude Unit (ARM 17.8.342; 40 CFR 63, Subpart CC; ARM 17.8.340; and 40 CFR 60, Subpart VV).

C.6. The No. 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 No. 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.7. CHS shall monitor and maintain all pumps, shutoff valves, relief valves and other piping and valves associated (as defined above) with the No. 1 Crude Unit as described in 40 CFR 60.482-1 through 60.482-10 (ARM 17.8.752; ARM 17.8.342; 40 CFR 63, Subpart CC; ARM 17.8.340; and 40 CFR 60, Subpart VV).

Compliance Demonstration

C.8. As required by the Department and Section III.A.1, compliance with the opacity limitations listed in Section III.C.1 and C.2 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

C.9. CHS shall institute a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV; 40 CFR 60, Subpart GGG; and 40 CFR 63, Subpart CC (ARM 17.8.340 and 40 CFR 60, Subparts VV and GGG; and ARM 17.8.342 and 40 CFR 63, Subpart CC).

C.10. Following completion of the #1 Crude Unit Revamp Project, CHS shall institute a monitoring and maintenance program, as described under 40 CFR Part 60 VVa, and meeting the requirements of 40 CFR Part 60 GGGa (ARM 17.8.340, ARM 17.8.752, 40 CFR 60, Subpart GGGa).

C.11. CHS shall maintain a log, 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 VV).

Record keeping

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

C.13. CHS shall conduct record keeping in accordance with 40 CFR 60, Subpart GGG, and 40 CFR 63, Subpart CC, including record keeping 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 and Subpart VV; ARM 17.8.342 and 40 CFR 63, Subpart CC).

C.14. CHS shall comply with the recordkeeping and reporting requirements contained in 40 CFR 60, Subpart GGGa (ARM 17.8.340 and 40 CFR 60, Subpart GGGa).

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

Reporting

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

C.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).

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

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification that the records required by Section III.C.13 and Section III.C.14 were maintained;

c. Certification of compliance with 40 CFR 63, Subpart CC;

d. Certification of compliance with 40 CFR 60, Subpart GGG; and

e. Certification of compliance with 40 CFR 60, Subpart GGGa.

D. EU003 – No. 2 Crude Unit

No. 2 Crude Unit Main Heater (2CV-HTR-1), No. 2 Crude Unit Vacuum Heater (2CV-HTR-2)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
D.1, D.4, D.7, D.9-D.12	Opacity	40%	Method 9	As Required by the Department and Section III.A.1	Semi-annual
D.2, D.5, D.6, D.8, D.9, D.11, D.12	No. 2 Crude Unit	40 CFR 60, Subpart GGG	Subpart VV	Subpart VV	
D.3, D.5, D.6, D.8, D.9, D.11, D.12	No. 2 Crude Unit	40 CFR 63, Subpart CC	Subpart VV	Subpart VV	
		Equipment Leaks Monitoring and Maintenance Plan	Log	During Performance of Program	

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 VV applies to the various pumps, valves, flanges, and other equipment in VOC service within the No. 2 Crude Unit constructed or modified after January 4, 1983 (ARM 17.8.340; 40 CFR 60, Subpart GGG; and 40 CFR 60, Subpart VV).

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 VV applies to the various pumps, valves, flanges, and other equipment in organic HAP service within the No. 2 Crude Unit (ARM 17.8.342; 40 CFR 63, Subpart CC; ARM 17.8.340; and 40 CFR 60, Subpart VV).

Compliance Demonstration

D.4. 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.5. CHS shall institute a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV, 40 CFR 60, Subpart GGG, and 40 CFR 63, Subpart CC (ARM 17.8.340 and 40 CFR 60, Subparts VV and GGG and ARM 17.8.342 and 40 CFR 63, Subpart CC).

D.6. CHS shall maintain a log, 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 VV).

Record keeping

D.7. All source test record keeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

D.8. CHS shall conduct record keeping in accordance with 40 CFR 60, Subpart GGG and 40 CFR 63, Subpart CC, including record keeping 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 and Subpart VV; ARM 17.8.342 and 40 CFR 63, Subpart CC).

D.9. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

D.10. 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.11. 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.12. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification that the records required by Section III.D.8 were maintained;

c. Certification of compliance with 40 CFR 63, Subpart CC; and

d. Certification of compliance with 40 CFR 60, Subpart GGG.

E. EU004 – PDA Unit – Shutdown

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

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
F.1, F.10, F.17, F.20-F.24	Opacity	40%	Method 9	As Required by the Department and Section III.A.1	Semi-annual
F.2, F.10, F.17, F.20-F.24	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	
F.3, F.11, F.12, F.18, F.20, F.23, F.24	Naphtha Hydrotreating Unit	40 CFR 60, Subpart GGG	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	
F.4, F.11, F.12, F.18, F.20, F.23, F.24	Naphtha Hydrotreating Unit	40 CFR 63, Subpart CC	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	
		Equipment Monitoring and Maintenance Plan	Log	During Performance of Program	
F.5, F.13, F.20, F.22 - F.24	NHT Charge Heater - SO_2	1.54 tons/ 12-month rolling and 0.70 lb/hr	RFG H_2S CEMS, see Section B.	Annual	Semi-annual/ Quarterly
F.6, F.14, F.17, F.20 - F.24	NHT Charge Heater - NO_x	6.55 tons / 12-month rolling and 1.50 lb/hr	Method 7	Every Two Years	
F.7, F.14, F.17, F.20 - F.24	NHT Charge Heater - CO	400 ppmvd at 3% oxygen / 30-day rolling	Method 10	Every Two Years	
F.8, F.15, F.20, F.22 - F.24	NHT Charge Heater - VOC	0.86 tons / 12-month rolling	Emission calculations, see Section B.	Annual	
F.9, F.16, F.19, F.20, F.23 & F.24	NHT Charge Heater	No fuel oil	Recordkeeping	On-going	

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)).

F.3. 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 VV applies to the various pumps, valves, flanges, and other equipment in VOC service within the Naphtha Hydrotreating Unit constructed or modified after January 4, 1983 (ARM 17.8.340; 40 CFR 60, Subpart GGG and Subpart VV).

F.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 VV applies to the various pumps, valves, flanges, and other equipment in organic HAP service within the Naphtha Hydrotreating Unit (ARM 17.8.342; 40 CFR 63, Subpart CC; ARM 17.8.340; and 40 CFR 60, Subpart VV).

F.5. CHS shall not cause or authorize SO_2 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.6. CHS shall not cause or authorize NO_x 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.7. CHS shall not cause or authorize CO emissions from the NHT Charge Heater (H-8301) to exceed 400 ppmvd at 3% O_2 on a 30-day rolling average (ARM 17.8.752).

F.8. 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).

F.9. CHS shall not fire fuel oil in the NHT Charge Heater (ARM 17.8.752, ARM 17.8.340, and 40 CFR 60 Subpart J).

Compliance Demonstration

F.10. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.F.1 & 2 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

F.11. CHS shall institute a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV and Subpart GGG; and 40 CFR 63, Subpart CC (ARM 17.8.340 and 40 CFR 60, Subpart VV and Subpart GGG; and ARM 17.8.342 and 40 CFR 63, Subpart CC).

F.12. CHS shall maintain a log, 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 VV).

F.13. CHS shall monitor compliance with the SO_2 limits for the NHT Charge Heater listed in Section III.F.5 through monitoring the volume and H_2S concentration of refinery fuel gas combusted, as specified in Section III.B (ARM 17.8.1213).

F.14. 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 NO_X and CO, concurrently, and the results submitted to the Department in order to monitor compliance with the NO_X and CO emission limits contained in Sections III.F.6 & 7 (ARM 17.8.105 and ARM 17.8.749).

F.15. CHS shall monitor compliance with the VOC limit for the NHT Charge Heater listed in Section III.F.8 through maintaining records of the fuel gas consumed and using the emission factor as specified in Section III.B (ARM 17.8.1213).

F.16. Compliance with Section III.F.9 shall be accomplished by not firing fuel oil in this unit (ARM 17.8.1213).

Record keeping

F.17. All source test record keeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

F.18. CHS shall conduct record keeping in accordance with 40 CFR 60, Subpart GGG and 40 CFR 63, Subpart CC, including record keeping 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 and Subpart VV; ARM 17.8.342 and 40 CFR 63, Subpart CC).

F.19. CHS shall maintain records that fuel oil was not fired in this unit to document compliance with Section III.F.16 (ARM 17.8.1213).

F.20. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

F.21. 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.22. CHS shall submit quarterly emission reports to the Department within 30 days of the end of each reporting period. Copies of the emission reports shall be submitted to both the Billings regional office and the Helena office of the Department. 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;

c. A summary of excess emissions or applicable concentrations for each pollutant and the averaging period identified in Section III.F.5-8;

d. Compliance determinations for limits specifically allowed in Section III.F.5-8;

e. Reasons for any emissions in excess of those specifically allowed in Section III.F.5-8, with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

F.23. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements (ARM 17.8.1212).

F.24. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification that the records required by Section III.F.19 and F.20 were maintained;

c. Certification of compliance with emission limits and that quarterly reports were submitted as required by Section III.F.22;

d. Certification of compliance with 40 CFR 60, Subpart GGG; and,

e. Certification of compliance with 40 CFR 63, Subpart CC.

G. EU006 – Middle Distillate Unifiner - *Shutdown*

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), Platformer Recycle Compressor Turbine (C-4772, Benzene Reduction Unit Oily Water Sewer)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
H.1, H.15, H.26, H.32, H.33, H.35, H.36	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	Semi-annual
H.2, H.16, H.17, H.27, H.32, H.35, H.36	Platformer Unit	40 CFR 63, Subpart CC	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	
		Equipment Monitoring and Maintenance Plan	Log	During Performance of Program	
H.3, H.18, H.28, H.32, H.35, H.36	Platformer Unit	40 CFR 63, Subpart UUU	Log	During Performance of Program	
H.4, H.19, H.29, H.32, H.35, H.36	Benzene Reduction Unit	40 CFR 60, Subpart GGGa	40 CFR 60, Subpart GGGa	40 CFR 60, Subpart GGGa	
H.5, H.20, H.30, H.32, H.35, H.36	Platformer Splitter Reboiler (P-HTR-3)	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	
H.6, H.21, H.32, H.34, H.35, H.36	Platformer Splitter Reboiler (P-HTR-3) SO_2	≤ 60 ppm H_2S in refinery fuel gas, 365-day rolling average; 1.8 tons/rolling 12-calendar month; 0.72 lb/hour	RFG H_2S CEMS, see Section B.	Annual	Quarterly
H.7, H.22, H.26, H.32, H.33, H.34, H.35, H.36	Platformer Splitter Reboiler (P-HTR-3) NO_x	≤ 6.99 tons/rolling 12-calendar month; 1.60 lb/hour	Method 7	Initially; Thereafter, As Required by the Department and Section III.A.1	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
H.8, H.22, H.26, H.32, H.33, H.34, H.35, H.36	Platformer Splitter Reboiler (P-HTR-3) CO	≤ 13.62 tons/rolling 12-calendar month; 3.11 lb/hour	Method 10	Initially; Thereafter, As Required by the Department and Section III.A.1	Quarterly
H.9, H.23, H.32, H.34, H.35, H.36	Platformer Splitter Reboiler (P-HTR-3) PM/PM_{10}	≤ 1.31 tons/rolling 12-calander month; 0.30 lb/hour	Emission calculations, see Section B.	Annual	
H.10, H.23, H.32, H.34, H.35, H.36	Platformer Splitter Reboiler (P-HTR-3) VOC	≤ 0.64 tons/rolling 12-calendar month	Emission calculations, see Section B.	Annual	
H.11, H.22, H.26, H.32, H.35, H.36	Platformer Splitter Reboiler (P-HTR-3)	Fitted with ULNBs	Written Notification	Within 15 days of actual installation	Semi-annual
			Method 7	Initially; Thereafter, As Required by the Department and Section III.A.1	
H.12, H.24, H.32, H.34, H.35, H.36	Platformer Splitter Reboiler (P-HTR-3) Heat Input Rate	≤ 39.9 MMBtu-HHV/hr	Log	Daily	Quarterly
H.13, H.25, H.31, H.32, H.35, H.36	Benzene Reduction Project Drains	All new drains will be routed to the sewer system that is NSPS Subpart QQQ compliance and all such drains will be treated as subject to NSPS Subpart QQQ requirements	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	Semi-annual
H.14, H.25, H.31, H.32, H.35, H.36	Benzene Reduction Project Junction Boxes/Vessels	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	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	

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 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 within the Platformer Unit (ARM 17.8.342; 40 CFR 63, Subpart CC; ARM 17.8.340; and 40 CFR 60, Subpart VV).

H.3. 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.4. 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 (ARM 17.8.340 and 40 CFR 60, Subpart GGGa).

H.5. 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; 40 CFR 60, Subpart Ja).

H.6. SO_2 emissions from the Platformer Splitter Reboiler (P-HTR-3) shall not exceed 60 ppmv H_2S 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.7. 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.8. 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.9. PM/PM_{10} emissions from the Platformer Splitter Reboiler (P-HTR-3) shall not exceed 1.31 tons/rolling 12-calendar month total (ARM17.8.749) and 0.30 lb/hour (ARM 17.8.752).

H.10. 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.11. The Platformer Splitter Reboiler (P-HTR-3) shall be fitted with ULNBs (ARM 17.8.752).

H.12. 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.13. 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).

H.14. 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).

Compliance Demonstration

H.15. 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.16. CHS shall institute a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV and CFR 63, Subpart CC (ARM 17.8.342 and 40 CFR 63, Subpart CC).

H.17. CHS shall maintain a log, 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 VV).

H.18. 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.19. CHS shall demonstrate compliance in accordance with 40 CFR 60, Subpart GGGa, to monitor compliance with Section III.H.4 (ARM 17.8.340 and 40 CFR 60, Subpart GGGa).

H.20. CHS shall demonstrate compliance in accordance with 40 CFR 60, Subpart Ja, to monitor compliance with Section III.H.5 (ARM 17.8.340 and 40 CFR 60, Subpart Ja).

H.21. CHS shall monitor compliance with the SO_2 limits for the Platformer Splitter Reboiler (P-HTR-3) listed in Section III.H.6 through monitoring the volume and H_2S concentration of refinery fuel gas combusted, as specified in Section III.B (ARM 17.8.1213).

H.22. The Platformer Splitter Reboiler (P-HTR-3) shall be initially tested for NO_x and CO, concurrently, and the results submitted to the Department in order to demonstrate compliance with the NO_x and CO emission limits contained in Sections III.H.7 and H.8(ARM 17.8.105 and ARM 17.8.749).

H.23. CHS shall monitor compliance with the PM/PM_{10} and VOC limits for the Platformer Splitter Reboiler (P-HTR-3) listed in Sections III.H.9 and H.10through maintaining records of the fuel gas consumed and using the emission factor as specified in Section III.B (ARM 17.8.1213).

H.24. 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.12 (ARM 17.8.1213).

H.25. 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).

Record keeping

H.26. All source test record keeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

H.27. CHS shall conduct record keeping in accordance with 40 CFR 63, Subpart CC, including record keeping 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 VV; ARM 17.8.342 and 40 CFR 63, Subpart CC).

H.28. CHS shall conduct record keeping 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.29. CHS shall conduct record keeping 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.30. CHS shall conduct record keeping 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.31. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart QQQ (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

H.32. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

H.33. 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.34. CHS shall prepare and submit a quarterly emission report within 30 days of the end of each calendar quarter. Copies of the quarterly emission report shall be submitted to both the Billings regional office and the Helena office of the Department. The quarterly report shall also include the following (ARM 17.8.749):

a. SO_2 emission data from the refinery fuel gas system continuous H_2S concentration monitor required by Section III.B. The SO_2 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

b. Platformer Splitter Reboiler (P-HTR-3) NO_x emission data from the fuel gas flow rate meter and emission factors developed from the most recent compliance source test. The Platformer Splitter Reboiler (P-HTR-3) NO_x emission rates shall be reported for the following averaging periods:

i. Average lb/hr per calendar day
ii. Total tons per month

H.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).

H.36. The semiannual reporting shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification that the records required by Section III.H.27 – H.30 were maintained; and

c. A summary of reporting done to conform with requirements of 40 CFR 60, Subpart QQQ;

I. EU008 – Fluid Catalytic Cracking (FCC) Unit

FCC Charge Heater (FCC-Heater-1), FCC Charge Heater (FCC-Heater-NEW), FCC Regenerator (FCC-VSSL-1)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
I.1, I..33, I.34, I.35, I.36, I.37, I.39, I.40, I.65, I.71, I.76, I.78, I.79	FCC Regenerator Opacity	30%	COMs	Ongoing	Semi-annual
I.2, I.34, I.49, I.63, I.66, I.71, I.78, I.79	FCC Regenerator	40 CFR 60, Subpart J	40 CFR 60, Subpart J	40 CFR 60, Subpart J	As applicable
I.3, I.24, I.27, I.31, I.35, I.62, I.63, I.71, I.78, I.79	FCC Regenerator (CO only)	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	As applicable
I.4, I.47, I.48, I.70, I.71, I.78, I.79	FCC Unit Piping	40 CFR 63, Subpart CC	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	As applicable
I.5, I.33, I.36, I.37, I.49, I.64, I.71, I.78, I.79	FCC Regenerator	40 CFR 63, Subpart UUU	40 CFR 63, Subpart UUU	40 CFR 63, Subpart UUU	As applicable
I.6, I.33, I.34, I.38, I.39, I.41, I.42, I.44, I.45, I.46, I.65, I.66, I.71, I.73, I.74, I.75, I.76, I.77-79	SIP: SO_2	2,142.3 lb/ 3-hour Period	CEMS	Ongoing	Semi-annual
			Method 6/6c	Annually	
I.7, I.33, I.34, I.38, I.39, I.41, I.42, I.44, I.45, I.46, I.65, I.66, I.71, I.73, I.74, I.75, I.76, I.77-79	SIP: SO_2	17,138.4 lb/ Calendar Day	CEMS	Ongoing	
			Method 6/6c	Annually	
I.8, I.33, I.34, I.38, I.39, I.41, I.42, I.44, I.45, I.46, I.65, I.66, I.71, I.73, I.74, I.75, I.76, I.77-79	SIP: SO_2	6,255,516 lb/Calendar Year	CEMS	Ongoing	
			Method 6/6c	Annually	
I.9, I.33, I.34, I.38, I.39, I.41, I.42, I.45, I.46,	SO_2 from FCC Regenerator	50 ppm at 0% O_2/7-day rolling average and 25 ppm at 0% O_2/365-day	CEMS	Ongoing	Quarterly

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
I.51, I.65, I.66, I.72, I.73, I.73, I.74, I.75, I.76, I.77-79		rolling average	Method 6/6c	Annually	
I.10, I.18, I.33,I.34, I.35, I.40, I.46, I.51, I.65, I.66, I.71, I.72, I.73, I.74, I.75, I.76, I.77-I.79	CO from FCC Regenerator	500 ppm at 0% O_2/1-hr	CEMS	Ongoing	
			Method 10	Annually	
I.11, I.18, I.33, I.34, I.35, I.40, I.46, I.51, I.65, I.66, I.71, I.72, I.73, I.74, I.75, I.76, I.77- I.79	CO from FCC Regenerator	100 ppm at 0% O_2/ rolling 365-days	CEMS	Ongoing	
			Method 10	Annually	
I.12, I.33, I.34, I.40, I.43, I.44, I.46, I.51, I.63, I.65, I.66, I.71, I.72, I.73, I.74, I.75, I.76, I.77, I.78, I.79	NO_x from FCC Regenerator	65.1 ppm at 0% O_2/ rolling 365-days	CEMS	Ongoing	
			Method 7e	Annually	
I.13, I.33, I.34, I.40, I.43, I.44, I.46, I.63, I.65, I.66, I.71, I.73, I.74, I.75, I.76, I.77, I.78, I.79	NO_x from FCC Regenerator	102 ppm at 0% O_2/rolling 7-days	CEMS	Ongoing	Quarterly
			Method 7e	Annually	
I.14, I.33, I.34, I.40, I.43, I.44, I.46, I.63, I.65, I.66, I.71, I.73, I.74, I.75, I.76, I.77, I.78, I.79	NO_x from FCC Regenerator	117 tons/rolling 12-months	CEMS	Ongoing	Quarterly
			Method 7	Annually	
I.15, I.2, I.16, I.17, I.34, I.50, I.51, I.63, I.65, I.72, I.73, I.74, I.78, I.79	PM from FCC Unit [after startup of new air blower]	1.0 lb PM/1000 lb coke burned Operate and maintain ESP	Method 5B/5F	Annually	
			Method 7	Annually	
I.15, I.50, I.51, I.72, I.78, I.79	PM Control Equipment on FCC Unit	Operate and maintain	Per consent decree	Per consent decree	
I.16, I.50, I.65, I.66, I.73- I.78	Particulate Matter, Industrial Processes	$E = 4.10 * P^{0.67}$ or $E = 55 * P^{0.11} - 40$	Method 5B/5F Log	Annually	
I.17, I.50, I.51, I.71, I.72, I.78, I.79	Propose PM emission limit to EPA; comply with limit once established by EPA	PM limit	PM test	Per consent decree	
I.18, I.33, I.51, I.69, I.71, I.78, I.79	CO and VOCs from Regenerator	Combustion promoters (as needed) and Good combustion practices	Log	On-going	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
I.19, I.52, I.65, I.66, I.71, I.73, I.74, I.78, I.79	FCC Charge Heater (FCC-Heater-1) - Opacity	40%	Method 9	Annually	Semi-Annual
I.20, I.53, I.67, I.71, I.73, I.74, I.78, I.79	FCC Charge Heater (FCC-Heater-1)	49.7 MMBtu/hr/rolling 12-months	Fuel gas usage (scfh) and the monthly average heat content of the fuel	On-going	
I.2, I.54, I.65, I.71, I.73, I.74, I.76, I.78, I.79	NO_x from FCC Charge Heater (FCC-Heater-1)	6.27 lb/hr or 22.87 tons/rolling 12-months	Method 7	Annually	
I.22, I.53, I.54, I.65, I.71, I.73, I.74, I.76, I.78, I.79	CO from FCC Charge Heater (FCC-Heater-1)	5.26 lb/hr or 19.21 tons/rolling 12-months	Method 10	Annually	
I.23, I.55, I.71 I.78, I.79	Shutdown and Removal of FCC Charge Heater (FCC-Heater-1)	Shutdown and permanently remove from service within 180 days of the initial startup of FCC Charge Heater (FCC-Heater-NEW)	Written Notification	Notification of permanent removal from service for the FCC Charge Heater (FCC-Heater-1) within 180 days of FCC-Heater-NEW startup	Semi-annual
I.3, I.24, I.27, I.31, I.35, I.53, I.62, I.63, I.71, I.78, I.79	FCC Charge Heater (FCC-Heater-NEW)	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	Semi-annual
I.25, I.56, I.65, I.71, I.73, I.74, I.78, I.79	FCC Charge Heater (FCC-Heater-NEW) - Opacity	20 %	Method 9	Annually	Semi-annual
I.26, I.53, I.57, I.65, I.67, I.69, I.71, I.73, I.78, I.79	FCC Charge Heater (FCC-Heater-NEW)	ULNB	Certify	On-going	Semi-Annual
		66 MMBtu/hr based on 30-day rolling hourly average	Fuel gas usage (scfh) and the monthly average heat content of the fuel		
I.27, I.28, I.29, I.33, I.35, I.40, I.46, I.54, I.57, I.58, I.59, I.62, I.63, I.65, I.66, I.71, I.73, I.74, I.75, I.76, I.77, I.78, I.79	NO_x from FCC Charge Heater (FCC-Heater-NEW)	40 ppm at 0% O_2/ 30-day rolling average basis	NOx CEMS Method 7	Initial testing and then Annually	Quarterly
		0.04 lb/MMBtu-HHV or 2.6 lb/hr			
		0.035 lb/MMBtu-HHV or 10.1 tons/rolling 12-months			
I.30, I.32, I.35, I.58, I.61, I.65, I.69, I.71, I.73, I.74, I.78, I.79	CO from FCC Charge Heater (FCC-Heater-NEW)	100 ppmv at 3% O_2/ 24-hour rolling average basis	Method 10	Annually	Semi-Annual
I.31, I.35, I.60, I.68, I.71, I.76, I.78, I.79	H_2S in Fuel Gas (FCC-Heater-NEW)	60 ppmvd/365 day rolling average	40 CFR 60 Subpart Ja	40 CFR 60 Subpart Ja	Quarterly

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
I.32, I.35, I.58, I.61, I.69, I.71, I.73, I.78, I.79	CO, VOC, and $PM/PM_{10}/PM_{2.5}$ emissions from the FCC Charge Heater (FCC-Heater-NEW)	Implement proper design and good combustion techniques	Certify	On-going	Semi-annual
I.33, I.38, I.39, I.40, I.41, I.42, I.44, I.45, I.46, I.62, I.66, I.71, I.75, I.76, I.77, I.78, I.79	Continuous Stack Flow Rate Monitors (FCC Regenerator Stack and FCC-Heater-NEW)	Operate and Maintain	SO_2 SIP (Regenerator)	On-going	
			RATA	Annually	
I.47, I.48, I.70, I.71, I.78, I.79	Equipment Leaks	Monitoring and Maintenance Plan	Log	During Performance of Program	

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; 40 CFR 60, Subpart J; and CHS Consent Decree Paragraph 55).

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 SO_2, PM, and opacity (ARM 17.8.340 and 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 VV applies to the various pumps, valves, flanges, and other equipment in organic HAP service within the FCC Unit (ARM 17.8.342; 40 CFR 63, Subpart CC; ARM 17.8.340; and 40 CFR 60, Subpart VV).

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 CO, PM, and opacity (ARM 17.8.342; 40 CFR 63, Subpart UUU).

I.6. CHS shall not cause or authorize total SO_2 emissions from the FCC regenerator stack to exceed the limit of 2,142.3 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).

I.7. CHS shall not cause or authorize total SO_2 emissions from the FCC Regenerator stack to exceed the limit of 17,138.4 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).

I.8. CHS shall not cause or authorize total SO_2 emissions from the FCC Regenerator stack to exceed the limit of 6,255,516 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).

I.9. CHS shall not cause or authorize SO_2 emissions from the FCC Regenerator stack to exceed 50 ppm_{vd} at 0% O_2 per 7-day rolling average and 25 ppm_{vd} at 0% O_2 on a 365-day rolling average (ARM 17.8.749, CHS Consent Decree paragraphs 32-33).

I.10. CHS shall not cause or authorize CO emissions from the FCC Regenerator stack to exceed 500 ppm_{vd} at 0% O_2 per 1-hour time period (ARM 17.8.340 and 40 CFR 60, Subpart Ja; ARM 17.8.752 and CHS Consent Decree paragraph 41).

I.11. CHS shall not cause or authorize CO emissions from the FCC Regenerator stack to exceed 100 ppm_{vd} at 0% O_2 per 365-day rolling average (ARM 17.8.749 and CHS Consent Decree paragraph 41).

I.12. NO_x emissions from the FCCU shall not exceed 65.1 ppm_{vd} at 0% oxygen 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 is operating (CHS Consent Decree Paragraph 29 and ARM 17.8.752).

I.13. NO_x emissions from the FCCU shall not exceed 102 ppm_{vd} at 0% oxygen on a 7-day rolling average basis. This short-term limit shall exclude periods of startup, shutdown, malfunction or hydrotreater outages, 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 (CHS Consent Decree Paragraph 29 and ARM 17.8.752).

I.14. NO_x 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% oxygen on a 365-day rolling average) (ARM 17.8.749).

I.15. PM emissions from the FCC Unit shall be controlled with an ESP. CHS shall not cause or authorize total PM emissions from the FCC Unit stack to exceed 1 lb PM/1,000 lb of coke burned (ARM 17.8.752).

I.16. 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:
$E = 4.10 * P^{0.67}$

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

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

I.17. By September 30, 2010, CHS shall, based on the first annual stack test, a reasonable certainty of compliance, and other relevant information, propose to EPA an emission limit between 0.50 and 1.00 pound PM per 1000 pounds of coke burned on a 3-hour average basis. EPA shall, based on the first annual stack test, a reasonable certainty of compliance, and other relevant information, establish an emission limit between 0.50 and 1.00 pound PM per 1000 pounds of coke burned on a 3-hour average basis. CHS shall comply with the emissions limit once it is established by EPA. CHS shall incorporate this emission limit into applicable permits (CHS Consent Decree).

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 not cause or authorize emissions to be discharged into the outdoor atmosphere from the FCC Charge Heater (FCC-Heater-1) installed on or before November 23, 1968, that exhibit an opacity of 40% 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.20. The FCC Charge Heater (FCC-Heater-1) shall not exceed 49.7 MMBtu/hr on a rolling 12-month basis (ARM 17.8.749).

I.21. CHS shall not cause or authorize total NO_X emissions from the FCC Charge Heater (FCC-Heater-1) to exceed 6.27 lb/hr or 22.87 tons per rolling 12-month basis (ARM 17.8.749).

I.22. CHS shall not cause or authorize total CO emissions from the FCC Charge Heater (FCC-Heater-1) to exceed 5.26 lb/hr or 19.21 tons per rolling 12-month basis (ARM 17.8.749).

I.23. CHS shall shutdown FCC-Heater-1 and permanently remove from service as an emissions source within 180 days of the initial startup of FCC-Heater-NEW (ARM 17.8.749).

I.24. 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-Heater-NEW), as appropriate (ARM 17.8.340 and 40 CFR 60, Subpart Ja).

I.25. 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.26. The FCC Charge Heater (FCC-Heater-NEW) shall be equipped with an ultra low NOx burner (ULNB) and the firing rate of the heater shall not exceed 66 MMBtu/hr based on a 30-day rolling average (ARM 17.8.752).

I.27. CHS shall not cause or authorize NO_X emissions from the FCC Charge Heater (FCC-Heater-NEW) to exceed 40 ppm_v (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.28. CHS shall not cause or authorize NO_X emissions from the FCC Charge Heater (FCC-Heater-NEW) to exceed 0.035 lb/MMBtu-HHV or 10.1 tons based on a 12-calendar month total (ARM 17.8.752).

I.29. CHS shall not cause or authorize NO_X emissions from the FCC Charge Heater (FCC-Heater-NEW) to exceed 0.04 lb/MMBtu-HHV or 2.6 lb/hr based on an hourly 24-hour rolling average (ARM 17.8.752).

I.30. CHS shall not cause or authorize CO emissions from the FCC Charge Heater (FCC-Heater-NEW) to exceed 100 ppmv at 3% oxygen on a 24-hour rolling average basis (ARM 17.8.752).

I.31. CHS shall not burn in the FCC Charge Heater (FCC-Heater-NEW) any fuel gas that contains H_2S in excess of 60 ppm_v 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.32. CHS shall implement proper design and good combustion techniques to minimize CO, VOC, and $PM/PM_{10}/PM_{2.5}$ emissions from the FCC Charge Heater (FCC-Heater-NEW) (ARM 17.8.752).

Compliance Demonstration

I.33. CHS shall operate and maintain the following CEMS/CERMS on the FCC Regenerator stack:

a. SO_2 (ARM 17.8.749, Consent Decree, 40 CFR 60 Subpart J, and Billings/Laurel SIP)

b. Stack gas flow (ARM 17.8.749 and Billings/Laurel SIP)

c. NO_x (ARM 17.8.749, Consent Decree)

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

e. O_2 (ARM 17.8.749, Consent Decree, 40 CFR 60, Subpart J and 40 CFR 63, Subpart UUU)

f. Opacity (40 CFR 60, Subpart J and 40 CFR 63, Subpart UUU)

I.34. CHS shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart J (ARM 17.8.340, ARM 17.8.749, and 40 CFR 60, Subparts A and J).

I.35. 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.36. CHS shall be required to install and operate an opacity CEMS on the FCC Regenerator stack to monitor compliance with the opacity limitations (ARM 17.8.1213, ARM 17.8.340 and 40 CFR 60 Subpart J, and 40 CFR 63, Subpart UUU).

I.37. Opacity CEMS shall comply with 40 CFR 60, Appendix B Performance Specification 1 (ARM 17.8.342 and 40 CFR 63, Subpart UUU, and ARM 17.8.1213).

I.38. Compliance with the SO_2 emission limitations contained in Section III.I.6-9 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003, Consent Decree).

I.39. SO_2, and O_2 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003, Consent Decree).

I.40. NO_x, CO, and O_2 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.41. For the FCC Regenerator stack SO_2 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

I.42. In order to certify the SO_2 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.1 of this permit (ARM 17.8.106).

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 SO_2 (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003, 40 CFR 60.13).

I.43. In order to certify the NO_x 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 NO_x (40 CFR 60.13).

I.44. 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).

I.45. SO_2 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

I.46. All other 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.47. CHS shall institute a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV; and 40 CFR 63, Subpart CC (ARM 17.8.340 and 40 CFR 60, Subparts VV; and ARM 17.8.342 and 40 CFR 63, Subpart CC).

I.48. CHS shall maintain a log, 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 VV).

I.49. CHS shall conduct all monitoring, testing, and record keeping as required by 40 CFR 60, Subpart J and 40 CFR 63, Subpart UUU (ARM 17.8.340 and 40 CFR 60, Subpart J; ARM 17.8.342 and 40 CFR 63, Subpart UUU).

I.50. CHS shall conduct PM tests on the FCC Regenerator stack on an annual basis, or on another testing schedule as may be approved by the Department to monitor compliance with the limits in Section III.I.15, 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 17.8.749; ARM 17.8.340 and 40 CFR 60, Subpart J; CHS Consent Decree paragraph 38; and ARM 17.8.105). CHS shall follow the stack test protocol specified in 40 CFR 60.106(b)(2) to measure PM emissions on the FCCU at the Laurel Refinery. CHS shall propose and submit the stack test protocol for approval to EPA and Montana DEQ no later than December 31, 2008. During the first two years of operations following installation of the PM control equipment, CHS shall conduct annual stack tests at the FCCU with the first test conducted by June 30, 2010. Tests may be conducted less frequently than annually upon a showing from at least three consecutive annual tests that limits are not being exceeded (CHS Consent Decree).

I.51. CHS shall monitor compliance with CHS Consent Decree provisions in accordance with applicable CHS Consent Decree requirements (CHS Consent Decree and ARM 17.8.1213).

I.52. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.I.19 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

I.53. Compliance with Sections III.I.20 and III.I.26 shall be accomplished by maintaining records for the FCC Charge Heater (FCC-Heater-1) and the FCC Charge Heater (FCC-Heater-NEW) heat input limit, based on fuel gas flow rate monitoring and fuel analysis (ARM 17.8.749).

I.54. The FCC-Heater-1 shall be tested annually, or according to another testing/monitoring schedule as may be approved by the Department, for NO_x and CO, concurrently (ARM 17.8.105 and 17.8.749).

I.55. CHS shall provide the Department (both the Billings regional office and the Helena office) with written notification of the date of startup of FCC Charge Heater (FCC-Heater-NEW) within 15 days after the startup date. Within 180 days from startup of the FCC-Heater-NEW, CHS shall provide documentation to the Department demonstrating that the existing FCC-Heater-1 has been permanently removed from service and rendered inoperable (ARM 17.8.340 and ARM 17.8.749).

I.56. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.I.25 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

I.57. CHS shall demonstrate compliance with Section III.I.26 by ensuring that FCC Charge Heater (FCC-Heater-NEW) operates with ULNB technology and compliance with the firing rate limit shall be determined using fuel gas usage (scfh) and the monthly average heat content of the fuel (ARM 17.8.1213).

I.58. The FCC Charge Heater (FCC-Heater-NEW) shall be initially tested within 180 days of startup for NOx and CO, concurrently and then tested annually thereafter. For NOx/O_2 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.59. Continued compliance with the NOx emission limits in Section III.I.27, III.I.28, and III.I.29 for the FCC Charge Heater (FCC-Heater-NEW) shall be accomplished using the NOx/O_2 CEMs and the volumetric stack flow rate monitor (with appropriate moisture correction) (ARM 17.8.1213).

I.60. Compliance monitoring for the H_2S limit in Section III.I.31 shall be based upon continuous H_2S concentration monitor data and fuel gas flowmeter data as required in Section III.B (ARM 17.8.1213).

I.61. Compliance with Section III.I.32 shall be accomplished by certifying proper design and good combustion techniques were used to minimize CO, VOC, and $PM/PM_{10}/PM_{2.5}$ emissions from the FCC Charge Heater (FCC-Heater-NEW) (ARM 17.8.1213).

I.62. CHS shall operate and maintain the following on the FCC Charge Heater (FCC-Heater-NEW):

a. Stack gas flow (ARM 17.8.749)

b. NOx/O_2 (ARM 17.8.749 and 40 CFR 60, Subpart Ja)

Recordkeeping

I.63. CHS shall conduct all applicable record keeping 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.64. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 63, Subpart UUU (ARM 17.8.342 and 40 CFR 63, Subpart A and UUU).

I.65. All compliance source test record keeping 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.66. CHS shall maintain a file of all measurements from the CEMS and performance testing measurements, including: all CEMS performance evaluations; all CEMS 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.67. CHS shall maintain records of operation including documentation of firing rate and any maintenance and/or inspection activities performed on the ULNB (ARMB 17.8.1212).

I.68. CHS shall maintain records documenting all H_2S 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.69. CHS shall maintain records that proper design and good combustion techniques were implemented for the FCC Charge Heater (FCC-Heater-NEW) to document compliance with Section III.I.32 (ARM 17.8.1212).

I.70. CHS shall conduct record keeping in accordance with 40 CFR 63, Subpart CC, including record keeping for equipment leaks performed in accordance with 40 CFR 60.486 and 40 CFR 63.654 (ARM 17.8.340; 40 CFR 60, Subpart VV; ARM 17.8.342 and 40 CFR 63, Subpart CC).

I.71. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

I.72. CHS shall perform recordkeeping with respect to the CHS Consent Decree provisions in accordance with applicable CHS Consent Decree requirements (CHS Consent Decree and ARM 17.8.1212).

Reporting

I.73. 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.74. 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).

I.75. 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).

I.76. CHS shall submit quarterly emission reports to the Department based on data from the installed CEMS/CERMS or other monitoring/testing information. CHS shall submit the quarterly emission reports within 30 days of the end of each reporting period. Copies of the emission reports shall be submitted to both the Billings regional office and the Helena office of the Department. 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 SO_2 concentrations (ppmv);

c. Daily and monthly NO_x averages in ppm, corrected to 0% O_2;

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 or applicable concentrations for each pollutant and the averaging time identified in Section III.I.1, 6-14, 17, 19-22, 27-31;

g. Compliance monitoring for hourly, 24-hour, monthly and annual limits specifically allowed in Section III.I.1, 6-14, 17, 19-22, 27-31; and

h. Reasons for any emissions in excess of those specifically allowed in Section III.I.1, 6-14, 19-22, 27-31 with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

I.77. 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 Billings Regional Office. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

I.78. 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.79. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification that the records required by Section III.I.53, III.I.67, III.I.68, and III.I.69 were maintained;

c. Certification of compliance with emission limits and that quarterly reports were submitted as required by Section III.I.76;

d. Certification of compliance with Stipulation limits and that quarterly reports were submitted as required by Section III.I.77;

e. Certification of compliance with applicable portions of 40 CFR 60, Subpart J (including FCC Unit Regenerator);

f. Certification of compliance with applicable portions of 40 CFR 60, Subpart Ja;

g. Certification of compliance with 40 CFR 63, Subpart CC;

h. Certification of compliance with 40 CFR 63, Subpart UUU;

i. Summary documentation regarding the status of the FCC Charge Heater (FCC-Heater-1) and the FCC Charge Heater (FCC-Heater-NEW); and

j. Certification of compliance with applicable requirements of CHS Consent Decree, including any reporting requirements.

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

Alkylation Unit Hot Oil Belt Heater (ALKY-HTR-1), Miscellaneous Process Vents (Alkylation Unit Butamer Stabilizer Offgas)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirement
J.1, J.5, J.10, J.13 - J.15	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	Semi-annual
J.2, J.6, J.8, J.9, J.11, J.13 - J.15	Alkylation/ Butamer/Merox/ Saturate Units	40 CFR 60, Subpart GGG	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	Semi-annual
J.3, J.6, J.8, J.9, J.13- J.15	Alkylation/ Butamer/Merox/ Saturate Units	40 CFR 63, Subpart CC	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	
J.4, J.7, J.12-J.15	Miscellaneous Process Vents	40 CFR 63.643	40 CFR 63.644 & 645	40 CFR 63.644 & 645	40 CFR 63.654
J.8, J.9, J.11, J.13-J.15	Equipment Leaks	Monitoring and Maintenance Plan	Log	During Performance of Program	Semi-annual

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 VV applies to the various pumps, valves, flanges, and other equipment in VOC service within the Alkylation/Butamer/Merox/Saturate Units constructed or modified after January 4, 1983 (ARM 17.8.340; 40 CFR 60, Subpart GGG; and 40 CFR 60, Subpart VV).

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 VV 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; 40 CFR 63, Subpart CC; ARM 17.8.340; and 40 CFR 60, Subpart VV).

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 Miscellaneous Process Vents Provisions (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Compliance Demonstration

J.5. 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.6. CHS shall conduct all record keeping, 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.7. Compliance monitoring for miscellaneous process vents shall be performed in accordance with 40 CFR 63.654, 63.644, and/or 63.645, as appropriate (ARM 17.8.342 and 40 CFR 63, Subpart CC).

J.8. CHS shall institute a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV and Subpart GGG and 40 CFR 63, Subpart CC (ARM 17.8.340 and 40 CFR 60, Subpart VV and Subpart GGG, and ARM 17.8.342 and 40 CFR 63, Subpart CC).

J.9. CHS shall maintain a log, 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 VV).

Record keeping

J.10. All source test record keeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

J.11. CHS shall conduct record keeping in accordance with 40 CFR 60, Subpart GGG; and 40 CFR 63, Subpart CC, including record keeping 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 VV, Subpart GGG; and 40 CFR 63, Subpart CC).

J.12. Record keeping for miscellaneous process vents shall be performed in accordance with 40 CFR 63.654, 63.644, and/or 63.645, as appropriate (ARM 17.8.342 and 40 CFR 63, Subpart CC).

J.13. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

J.14. 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.15. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results o f any source testing that was performed during the reporting period;

b. Certification that the records required by Section III.J.8 and J.9 were maintained;

c. Certification of compliance with 40 CFR 60, Subpart GGG ; and

d. Certification of compliance with 40 CFR 63, Subpart CC.

K. EU010 – Hydrodesulfurization (HDS) Unit (Future 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), and the Hydrogen compressor gas engine (C-201B).

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
K.1, K.34, K.56, K.68, K.73, K.74	HDS Unit	40 CFR 60, Subpart GGG	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	Semi-annual
K.2, K.35, K.57, K.68, K.73, K.74	Mild Hydrocracker (once constructed)	40 CFR 60, Subpart GGGa	40 CFR 60, Subpart GGGa	40 CFR 60, Subpart GGGa	
K.3, K.36, K.58, K.68, K.70, K.73, K.74,	HDS Unit	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	
K.4, K.37, K.55, K.68, K.73, K.74	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	
K.5, K.38, K.59, K.68, K.73, K.74	Compressor Engine (C-201B)	40 CFR 63, Subpart ZZZZ	40 CFR 63, Subpart ZZZZ	40 CFR 63, Subpart ZZZZ	
K.6, K.39, K.43, K.55, K.68, K.69, K.71, K.73, K.74	NO_x from C-201B	30.43 Tons per Rolling 12 Calendar-Month Total and 7.14 lb/hr	Method 7	Annually	Quarterly
K.7, K.39, K.43, K.55, K.68, K.69, K.71, K.73, K.74	CO from C-201B	68.59 Tons per Rolling 12 Calendar-Month Total, 6.40 lb/hr (firing natural gas), and 16.10 lbs/hr (firing propane)	Method 10	Annually	
K.8, K.45, K.60, K.68, K.71, K.73, K.74	VOC from C-201B	10.1 Tons per Rolling 12 Calendar-Month Total	Certify	Ongoing	
K.9, K.45, K.60, K.71, K.73, K.74	C-201B	Combust Only Natural Gas or Propane	Certify	Ongoing	Quarterly
K.10, K.46, K.61, K.68, K.70, K.73, K.75	C-201B	Maintain and operate a CO catalyst	Certify	Ongoing	
K.11, K.43, K.68, K.71, K.73, K.74	SO_2 from H-202	3.14 Tons per Rolling 12 Calendar-Month Total, and 1.43 lb/hr	RFG System H_2S CEMS, see Section B	Annually	
K.12, K.40, K.43, K.55, K.68, K.69, K.71, K.73, K.74	NO_x from H-202	8.34 Tons per Rolling 12 Calendar-Month Total and 2.09 lb/hr	Method 7	Every Two Years	
K.13, K.40, K.43, K.55, K.68, K.69, K.71, K.73, K.74	CO from H-202	6.43 Tons per Rolling 12 Calendar-Month Total and 1.61 lb/hr	Method 10	Every Two Years	
K.14, K.43, K.44, K.55, K.68, K.69, K.71, K.73, K.74	VOC from H-202	0.65 Tons per Rolling 12 Calendar-Month Total	Firing Only Natural Gas	Ongoing	
			Method 18 (when firing RFG)	Every 5 years	
K.15, K.20, K.25, K.47, K.62, K.68, K.71, K.73, K.74	H-202, H-201, H-101	Fuel Oil Cannot be Fired in These Units	Certify	Ongoing	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
K.16, K.43, K.68, K.71, K.73, K.74	SO_2 from H-201	4.35 Tons per Rolling 12 Calendar-Month Total and 1.99 lb/hr	RFG System H_2S CEMS, see Section B	Annually	
K.17, K.41, K.43, K.55, K.68, K.69, K.71, K.73, K.74	NO_x from H-201	11.56 Tons per Rolling 12 Calendar-Month Total and 2.9 lb/hr	Method 7	Every Two Years	
K.18, K.41, K.43, K.55, K.68, K.69, K.71, K.73, K.74	CO from H-201	8.92 Tons per Rolling 12 Calendar-Month Total and 2.23 lb/hr	Method 10	Every Two Years	
K.19, K.43, K.44, K.55, K.68, K.69, K.71, K.73, K.74	VOC from H-201	0.91 Tons per Rolling 12 Calendar-Month Total	Firing Only Natural Gas	Ongoing	
			Method 18 (when firing RFG)	Every 5 years	
K.21, K.43, K.68, K.71, K.73, K.74	SO_2 from H-101	1.68 Tons per Rolling 12 Calendar-Month Total and 2.15 lb/hr	RFG System H_2S CEMS, see Section B	Annually	Quarterly
K.22, K.42, K.43, K.55, K.68, K.69, K.71, K.73, K.74	NO_x from H-101	27.16 Tons per Rolling 12 Calendar-Month Total and 6.78 lb/hr	Method 7	Annually	
K.23, K.42, K.43, K.55, K.68, K.69, K.71, K.73, K.74	CO from H-101	13.93 Tons per Rolling 12 Calendar-Month Total and 4.51 lb/hr	Method 10	Annually	
K.24, K.43, K.44, K.55, K.68, K.69, K.71, K.73, K.74	VOC from H-101	0.35 Tons per Rolling 12 Calendar-Month Total	Firing Only Natural Gas	Ongoing	
			Method 18 (when firing RFG)	Every 5 years	
K.26, K.48, K.65, K.68, K.73, K.74	H-102 Reformer Heater	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	Semi-annual
K.27, K.49, K.64, K.68, K.73, K.74	100 Unit Hydrogen Plant Reformer Heaters	All available 100 Unit PSA tailgas shall be fired in the 100 Unit Hydrogen Plant reformer heaters except during startup, shutdown or process upset	Firing all available 100 Unit PSA tailgas in the 100 Unit Hydrogen Plant reformer heaters except during startup, shutdown or process upset	Ongoing	
K.28, K.50, K.65, K.68, K.71, K.73, K.74	H_2S in Fuel Gas (H-102)	60 ppmvd/365 day rolling average	40 CFR 60 Subpart Ja	40 CFR 60 Subpart Ja	Quarterly
K.29, K.51, K.52, K.55, K.55, K.68, K.69, K.71, K.73, K.74	NO_x from H-102	40 ppm_v at 0% O_2/ 24-hour rolling average , 2.6 lb/hr, and 11.3 tons/rolling 12-months	40 CFR 60 Subpart Ja	40 CFR 60 Subpart Ja	
			Method 7	Every Two Years	
K.30, K.51, K.52, K.53, K.55, K.68, K.69, K.71, K.73, K.74	CO from H-102	5.7 lb/hr and 25.1 tons/rolling 12-months	Method 10	Every Two Years	
K.31, K.51, K.55, K.68, K.69, K.71, K.73, K.74	CO from H-102 during startup and shutdown	11.5 lb/hr on a 24-hour rolling average	Method 10	Every Two Years	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
K.32, K.52, K.53, K.55, K.68, K.68, K.73, K.74	H-102 Reformer Heater	Fitted with ULNBs	Certify	On-going	Semi-annual
			Method 7	Annually	
K.33, K.54, K.67, K.68, K.73, K.74	CO, VOC, and $PM/PM_{10}/PM_{2.5}$ emissions from H-102	Implement proper design and good combustion techniques	Implementation of proper design and good combustion techniques	On-going	Semi-annual

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 VV applies to the various pumps, valves, flanges, and other equipment in VOC service within the HDS unit (including H-101, H-201, H-202, and C-201B) and any other equipment, constructed or modified after January 4, 1983 (ARM 17.8.340; 40 CFR 60, Subpart GGG and Subpart VV).

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 Modification Commenced After November 7, 2006. This requirement applies to the Mild Hydrocracker unit once constructed (ARM 17.8.340 and 40 CFR 60, Subpart GGGa).

K.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. These regulations shall apply to the HDS unit (including the oily water collection system for the HDS complex, the HDS oil/water separator facilities including T-16, T-18, T-21, T-22 and T-23, the HDS cooling water collection system, and the HDS cooling water Pielkenroad) and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

K.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 HDS complex (ARM 17.8.304 (2)).

K.5. CHS shall comply with all applicable requirements of 40 CFR 63, Subpart ZZZZ, NESHAPs for Stationary Reciprocating Internal Combustion Engines. Subpart ZZZZ applies to the replacement Compressor Engine (C-201B) installed in 2006 (ARM 17.8.342; 40 CFR 63, Subpart ZZZZ).

K.6. NO_x emissions from C-201B shall not exceed 30.43 tons per rolling 12-calendar month total, and 7.14 lb/hr (ARM 17.8.749).

K.7. CO emissions from C-201B shall not exceed 68.59 tons per rolling 12-calendar month total, 6.40 lb/hr when firing natural gas, and 16.10 lb/hr when firing propane (ARM 17.8.749).

K.8. VOC emissions from C-201B shall not exceed 10.1 tons per rolling 12-calendar month total (ARM 17.8.749).

K.9. CHS shall only combust natural gas or propane in C-201B (ARM 17.8.749).

K.10. CHS shall maintain and operate a CO catalyst on the C-201B compressor exhaust (ARM 17.8.749).

K.11. 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.12. 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.13. 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.14. VOC emissions from H-202 shall not exceed 0.65 tons per rolling 12-calendar month total (ARM 17.8.749).

K.15. CHS shall not combust fuel oil in this unit (H-202) (ARM 17.8.749, ARM 17.8.340, and 40 CFR 60, Subpart J).

K.16. 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.17. 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.18. 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.19. VOC Emissions from H-201 shall not exceed 0.91 tons per rolling 12-calendar month total (ARM 17.8.749).

K.20. CHS shall not combust fuel oil in this unit (H-201) (ARM 17.8.749, ARM 17.8.340, and 40 CFR 60, Subpart J).

K.21. 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.22. 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.23. 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.24. VOC emissions from H-101 shall not exceed 0.35 tons per rolling 12-calendar month total (ARM 17.8.749).

K.25. CHS shall not combust fuel oil in this unit (H-101) (ARM 17.8.749, ARM 17.8.340, and 40 CFR 60, Subpart J).

K.26. 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.27. 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.28. CHS shall not burn in the H-102 Reformer Heater any fuel gas that contains H_2S 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).

K.29. NOx emissions from H-102 shall not exceed 40 ppmv (dry basis, corrected to 0 percent excess air) on a 24-hour rolling average basis (40 CFR 60, Subpart Ja), 2.6 lb/hr (ARM 17.8.752), and 11.3 tons/rolling 12-calendar month total (ARM 17.8.749).

K.30. 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.31. During periods of startup or shutdown, CO emissions from the H-102 Reformer Heater shall not exceed 11.5 lb/hr on a 24-hour rolling average (ARM 17.8.749).

K.32. H-102 shall be fitted with ULNBs (ARM 17.8.752).

K.33. CHS shall implement proper design and good combustion techniques to minimize CO, VOC, and $PM/PM_{10}/PM_{2.5}$ emissions (ARM 17.8.752).

Compliance Demonstration

K.34. 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 HDS unit, 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.35. 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.36. 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.37. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.K.4 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

K.38. CHS shall meet the requirements of all testing and procedures of ARM 17.8.342, which references 40 CFR 63, Subpart ZZZZ, NESHAPs for Stationary Reciprocating Internal Combustion Engines. Subpart ZZZZ applies to the replacement C-201B Compressor Engine installed in 2006 (ARM 17.8.342; 40 CFR 63, Subpart ZZZZ).

K.39. The Compressor Engine (C-201B) shall be tested annually, 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), and the results submitted to the Department in order to monitor compliance with the NO_x and CO emission limits contained in Section III.K.6 and 7 (ARM 17.8.105 and ARM 17.8.749).

K.40. The Fractionator Feed Heater Stack (H-202) shall be tested every two 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), and the results submitted to the Department in order to monitor compliance with the NO_x and CO emission limits contained in Section III.K.12 and 13 (ARM 17.8.105 and ARM 17.8.749).

K.41. The Reactor Charge Heater Stack (H-201) shall be tested every two 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), and the results submitted to the Department in order to demonstrate compliance with the NO_x and CO emission limits contained in Section III.K.17 and 18 (ARM 17.8.105 and ARM 17.8.749).

K.42. The Reformer Heater Stack (H-101) shall be tested annually, 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), and the results submitted to the Department in order to demonstrate compliance with the emission limits contained in Section III.K.22 and 23 (ARM 17.8.105 and ARM 17.8.749).

K.43. In addition to the testing required in Section III.K.39 through 42, compliance monitoring for the emission limits applicable to the HDS complex sources listed in Sections III.K.6 through 24 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.

In addition, CHS shall monitor compliance with the SO_2 limits for the HDS complex sources through monitoring the volume and H_2S concentration of refinery fuel gas combusted, as specified in Section III.B. Firing these units solely on natural gas shall demonstrate compliance with the applicable SO_2 limits (ARM 17.8.1213).

K.44. 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.14, 19, and 24 by firing these units solely on natural gas. However, when refinery fuel gas is fired, these HDS complex sources shall be tested every 5 years using Method 18 (ARM 17.8.749 and ARM 17.8.1212).

K.45. Compliance with Section III.K.9 as well as the VOC limits for the Compressor Engine (C-201B) listed in Section III.K.8, shall be accomplished by firing only natural gas or propane in C-201B (ARM 17.8.1213).

K.46. Compliance with Section III.K.10 shall be accomplished by maintaining a CO catalyst on C-201B (ARM 17.8.1213).

K.47. Compliance with Section III.K.15, 20, and 25 shall be accomplished by not firing fuel oil in H-202, H-201, and H-101 (ARM 17.8.1213).

K.48. CHS shall demonstrate compliance in accordance with 40 CFR 60, Subpart Ja, to monitor compliance with Section III.K.26 (ARM 17.8.340 and 40 CFR 60, Subpart Ja).

K.49. Compliance with Section III.K.27 shall be accomplished 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.50. Compliance monitoring for the H_2S limit in Section III.K.28 shall be based upon continuous H_2S concentration monitor data and fuel gas flowmeter data as required in Section III.B (ARM 17.8.1213).

K.51. CHS shall conduct biennial performance tests for the H-102 Reformer Heater in accordance with 40 CFR 60, Subpart Ja (ARM 17.8.749, 40 CFR 60, Subpart Ja).

K.52. The H-102 Reformer Heater shall be tested every 2 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.K.29, 30, and 31 (ARM 17.8.105 and ARM 17.8.1213).

K.53. CHS shall demonstrate compliance with Section III.K.32 by ensuring that the H-102 Reformer Heater operates with ULNB technology (ARM 17.8.1213).

K.54. Compliance with Section III.K.33 shall be accomplished by implementing proper design and good combustion techniques to minimize CO, VOC, and $PM/PM_{10}/PM_{2.5}$ emissions from the H-102 Reformer Heater (ARM 17.8.1213).

Record keeping

K.55. CHS shall perform all source test record keeping in accordance with the appropriate test method and Section III.A.2 (ARM 17.8.106).

K.56. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subpart GGG).

K.57. CHS shall conduct record keeping 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.58. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart QQQ (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

K.59. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 63, Subpart ZZZZ (ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

K.60. CHS shall maintain records that only natural gas or propane was fired in C-201B to document compliance with Section III.K.45 (ARM 17.8.1212).

K.61. CHS shall maintain records that a CO catalyst was maintained on C-201B to document compliance with Section III.K.46 (ARM 17.8.1212).

K.62. CHS shall maintain records that fuel oil was not fired in this unit to document compliance with Section III.K.47 (ARM 17.8.1212).

K.63. CHS shall conduct record keeping 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.64. 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.49 (ARM 17.8.1212).

K.65. CHS shall maintain records documenting all H_2S concentration monitor data and fuel gas flowmeter data required in Section III.K.50. The data must be maintained, on-site, and must be submitted to the Department upon request (ARM 17.8.1212).

K.66. CHS shall maintain records of operation including documentation of any maintenance and/or inspection activities performed on the ULNB (ARM 17.8.1212).

K.67. 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.54 (ARM 17.8.1212).

K.68. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

K.69. 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.70. CHS shall provide the Department copies of testing results, monitoring operations, record keeping, 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.71. CHS shall submit quarterly emission reports to the Department based on data from the installed CEMS/CERMS. Emission reporting for SO_2 from the emission rate monitor shall consist of a daily 24-hour average (ppm SO_2, corrected to 0% oxygen (O_2)) 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. Copies of the quarterly emission report shall be submitted to both the Billings regional office and the Helena office of the Department. 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.6 through 24 and 28 through 31;

e. Compliance determinations for hourly, 24-hour and annual limits specifically allowed in Section III.K.6 through 24 and 28 through 31; and

f. Reasons for any emissions in excess of those specifically allowed in Section III.K.6 through 24 and 28 through 31 with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

K.72. 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 Billings Regional Office. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002 and May 22, 2003).

K.73. 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.74. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification that the records required by Section III.K.60, K.61, K.62, K.64 – K.67 were maintained;

c. Certification that compliance with 40 CFR 60, Subpart Ja was maintained;

d. Certification that compliance with 40 CFR 60, Subpart GGG was maintained;

e. Certification that compliance with 40 CFR 60, Subpart GGGa was maintained;

f. Certification that compliance with 40 CFR 60, Subpart QQQ was maintained;

g. Certification that compliance with 40 CFR 63, Subpart ZZZZ was maintained; and

h. Certification of compliance with unit emission limits and conditions of this section and that quarterly reports were submitted as required by Section III.K.71.

i. Certification of compliance with Stipulation limits and that quarterly reports were submitted as required by Section III.K.72.

L. EU011 – Zone D Sulfur Recovery Unit (SRU)

Zone D SRU Incinerator Stack (E-407 and INC-401)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
L.1, L.12, L.27, L.30, L.36, L.37	Zone D SRU	40 CFR 60, Subparts J and Ja	Subparts J and Ja	Subparts J and Ja	Semi-annual
L.2, L.13, L.28, L.30, L.36, L.37	Zone D SRU	40 CFR 63, Subpart UUU	Subpart J	Subpart J	
L.3, L.14, L.26, L.30, L.31, L.32, L.36, L.37	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	
L.4, L.15, L.17, L.18, L.20, L.21, L.24, L.26, L.30, L.31, L.32, L.34, L.36, L.37	SO_2	31.1 Tons per Rolling 12 Calendar-Month Total, 341.04 lb/day, and 14.21 lb/hr	CEMS	On-going	Quarterly
			Method 6/6c	Annually	
L.5, L.6, L.15, L.17, L.18, L.20, L.21, L.30, L.34, L.36, L.37	SO_2	125 ppmvd on a Rolling 12-month average corrected to 0% oxygen (*until* 180 days after completion of the Zone D SRU/TGTU expansion); 113.2 ppmvd on a daily rolling 365 day average corrected to 0% oxygen (*within* 180 days of completion of the Zone D SRU/TGTU expansion); and 250 ppmvd, on a Rolling 12-hour average corrected to 0% oxygen	Subparts J and Ja	Subparts J and Ja	
L.7, L.16, L.29, L.30, L.36, L.37	Zone D SRU Incinerator (E-407 & INC-401)	Fuel Oil Cannot Be Fired in This Unit	Certify	Ongoing	Semi-annual
L.8, L.15, L.17, L.18, L.19, L.20, L.21, L.22, L.24, L.26, L.30, L.31, L.32, L.35, L.36, L.37	SIP: SO_2	42.6 Pounds per 3-Hour Period	CEMS	Ongoing	Quarterly
			Method 6/6c	Annually	
L.9, L.15, L.17, L.18, L.19, L.20, L.21, L.22, L.24, L.26, L.30, L.31, L.32, L.35, L.36, L.37	SIP: SO_2	340.8 Pounds per Calendar Day	CEMS	Ongoing	
			Method 6/6c	Annually	
L.10, L.15, L.17, L.18, L.19, L.20, L.21, L.22, L.24, L.26, L.30, L.31, L.32, L.35, L.36, L.37	SIP: SO_2	124,392 Pounds per Calendar Year	CEMS	Ongoing	
			Method 6/6c	Annually	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
L.11, L.15, L.23, L.26, L.30, L.31, L.32, L.34, L.36, L.37	NO_x	3.5 Tons per Rolling 12 Calendar-Month Total, 19.2 lb/day, and 0.8 lb/hr	Method 7	Annually	
L.17, L.18, L.20, L.21, L.22, L.24, L.30, L.33, L.36, L.37	SO_2 and O_2, CEMS	Operate and Maintain	40 CFR 60, Appendix F	On-going	Semi-annual
			RATA	Annually	
L.17, L.18, L.20, L.21, L.22, L.24 L.25, L.30, L.33, L.36, L.37	Continuous Stack Flow Rate Monitor	Operate and Maintain	SO_2 SIP	On-going	
			RATA	Annually	

Conditions

L.1. CHS shall comply with all applicable requirements of 40 CFR 60, Subpart J - Standards of Performance for Petroleum Refineries and Subpart Ja – Standards of Performance for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After May 14, 2007. These regulations shall apply to the Zone D SRU Incinerator Stack (E-407 and INC-401) and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60, Subparts J and 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 (E-407 and 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. SO_2 emissions from the Zone D Incinerator Stack (E-407 and INC-401) shall not exceed 31.1 tons per rolling 12-calendar month total, 341.04 lb/day, and 14.21 lb/hr (ARM 17.8.749).

L.5. SO_2 emissions from the Zone D Incinerator Stack (E-407 and INC-401) shall not exceed 250 ppm_{vd}, rolling 12-hour average basis corrected to 0% O_2 (ARM 17.8.749, ARM 17.8.340, and 40 CFR 60, Subparts J and Ja).

L.6. Until 180 days after the completion of the expansion of the Zone D SRU/TGTU included in MAQP #1821-23, CHS shall operate and maintain the TGTU on the Zone D SRU to limit SO_2 emissions from the Zone D SRU incinerator stack (E-407 & INC-401) to no more than 125 ppmvd on a rolling 12-month average corrected to 0% O_2 on a dry basis (ARM 17.8.752). Within 180 days of completion of the expansion of the Zone D SRU/TGTU included in MAQP #1821-23, CHS shall operate and maintain the TGTU on the Zone D SRU to limit SO_2 emissions from the Zone D SRU incinerator stack (E-407 & INC-401) to no more than 113.2 ppmvd at 0% oxygen on a daily rolling 365 day average (ARM 17.8.749).

L.7. CHS shall not fire fuel oil in this unit (INC-401) (ARM 17.8.749, ARM 17.8.340, and 40 CFR 60, Subpart J).

L.8. 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.9. 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.10. 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 (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.11. NO_x emissions from the Zone D Incinerator Stack (E-407 and 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.12. 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 and Subpart Ja, Standards of Performance for Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After May 14, 2007. These regulations shall apply to the Zone D SRU and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60, Subparts J and Ja).

L.13. 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.14. 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.15. The Zone D SRU Incinerator Stack (E-407 and INC-401) shall be tested annually, or according to another testing/monitoring schedule as may be approved by the Department, for SO_2 and 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.8, - L.11 (ARM 17.8.105 and ARM 17.8.749).

L.16. Compliance with Section III.L.7 shall be accomplished by not firing fuel oil in INC-401 (ARM 17.8.1213).

L.17. CHS shall operate and maintain CEMS/CERMS on the Zone D Incinerator Stack (E-407 and INC-401) for SO_2, O_2, and volumetric flow rate (ARM 17.8.749, ARM 17.8.340, and 40 CFR 60, Subparts J and Ja, and Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.18. Compliance monitoring for ppm, hourly, 24-hour and annual SO_2 limits for the Zone D SRU Incinerator stack shall be based upon CEMS data utilized for SO_2 as required in Section III.L.17 (ARM 17.8.1213).

L.19. Compliance with the SO_2 emission limitations contained in Section III.L.8, 9 and 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.20. CEMS and CERMS required by this permit shall comply with all applicable provisions of 40 CFR 60.5 through 60.13, Subparts J, 60.100-108, Subparts Ja, 60.100a-108a, 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002,and May 22, 2003; 17.8.340 and 40 CFR 60, Subparts J and Ja).

L.21. 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.22. 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.23. In addition to the testing required in Section III.L.15, compliance monitoring for the NO_x 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.24. In order to certify the SO_2 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.25. 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).

Record keeping

L.26. CHS shall perform all source test record keeping in accordance with the appropriate test method and Section III.A.2 (ARM 17.8.106).

L.27. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subparts J and Ja, including for the Zone D SRU and other associated equipment (ARM 17.8.340 and 40 CFR 60, Subparts J and Ja).

L.28. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 63, Subpart UUU (ARM 17.8.342 and 40 CFR 63, Subpart UUU).

L.29. CHS shall maintain records that fuel oil was not fired in INC-401 to document compliance with Section III.L.16 (ARM 17.8.1213).

L.30. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

L.31. 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.32. 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.33. 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.34. CHS shall submit quarterly emission reports to the Department within 30 days of the end of each calendar quarter. Copies of the quarterly emission reports shall be submitted to both the Billings regional office and the Helena office of the Department. 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.4-6 and L.8-11;

f. Compliance determinations for hourly, 24-hour and annual limits specifically allowed in Section III.L.4-6 and L.8-11; and

g. Reasons for any emissions in excess of those specifically allowed in Section III.L.4-6 and L.8-11 with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

L.35. 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 Billings Regional office. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

L.36. 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.37. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification that the records required by Section III.L.29 were maintained;

c. Certification that compliance with applicable sections of 40 CFR 60, Subparts J and Ja, including for the Zone D SRU, was maintained;

d. Certification that compliance with 40 CFR 63, Subpart UUU, was maintained;

e. Certification of compliance with unit emission limits and conditions of this section and that quarterly reports were submitted as required by Section III.L.34; and

f. Certification of compliance with Stipulation limits and that quarterly reports were submitted as required by Section III.L.35.

M. EU012 – Zone A Sulfur Recovery Unit (SRU)

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

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
M.1, M.28, M.33, M.40, M.41	Zone A SRU	40 CFR 60, Subpart J	40 CFR 60, Subpart J	40 CFR 60, Subpart J	Semi-annual
M.2, M.14, M.29, M.33, M.37, M.40, M.41	Zone A TGTU Process Drains	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	
M.3, M.15, M.30, M.33, M.40, M.41	Zone A SRU	40 CFR 63, Subpart UUU	40 CFR 63, Subpart UUU	40 CFR 63, Subpart UUU	
M.4, M.16, M.33, M.34, M.40, M.41	Opacity	20%	Method 9	As required by Department and Section III.A.1	
M.5, M.17-M.20, M.22, M.23, M.27, M.33 - M.36, M.39- M.41	SIP: SO_2	2,916.3 lb/ 3-Hour Period	CEMS	Ongoing	Quarterly
			Method 6/6c	Annually	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
M.6, M.17-M.20, M.22, M.23, M.27, M.33 –M.36, M.39 - M.41	SIP: SO_2	23,330.4 lb/ Calendar Day	CEMS	Ongoing	
			Method 6/6c	Annually	
M.7, M.17-M.20, M.22, M.23, M.27, M.33 –M.36, M.39- M.41	SIP: SO_2	8,515,596 lb/ Calendar Year	CEMS	Ongoing	
			Method 6/6c	Annually	
M.8, M.17, M.18, M.20, M.22, M.23, M.27, M.33 – M.36, M.38, M.40, M.41	SO_2	11.6 lb/hour; 278.4 lb/day; and 40.66 tons/rolling 12-month	CEMS	Ongoing	
			Method 6/6c	Annually	
M.9, M.17, M.18, M.22, M.23, M.27, M.33 – M.36, M.38, M.40, M.41	SO_2	250 ppm at 0% O_2 on a rolling 12-hour average and 200 ppm at 0% O_2 on a rolling 12-month average	CEMS	Ongoing	
			Method 6/6c	Annually	Quarterly
M.10, M.23, M.27, M.33 - M.36, M.38, M.40, M.41	NOx	1.09 lb/hour; and 4.8 tons/rolling 12-month total	Method 7	5-year	
M.11, M.24, M.27, M.33 - M.36, M.40, M.41	PM	$E = 4.10 * P^{0.67}$ or $E = 55 * P^{0.11} - 40$	Method 5	As Required by the Department	
M.12, M.25, M.31, M.33, M.40, M.41	Stack Height	Height no less than 132 feet	Certify	Annually	Semi-annual
M.13, M.26, M.32, M.33, M.40, M.41	Fuel Oil	Fuel oil shall not be fired in this unit	Certify	Annually	
M.17 – M.20, M.22, M.33, M.36, M.40, M.41	SO_2 and O_2 CEMS	Operate and Maintain	40 CFR 60, Appendix F	On-going	
			RATA	Annually	Semi-annual
M.17 - M.22, M.33, M.36, M.40, M.41	Stack Flow Rate Monitors	Operate and Maintain	SO_2 SIP	On-going	
			RATA	Annually	

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% oxygen, on a 12-hour rolling average basis, as required by 40 CFR 60.104(a)(2) (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 SO_2 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 SO_2 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 SO_2 emissions from the Zone A SRU TGI stack (SRU-AUX-4) exceed the limit of 23,330.4 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).

M.7. CHS shall not cause or authorize total SO_2 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 SO_2 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 SO_2 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 not cause or authorize total SO_2 emissions from the Zone A SRU TGI stack (SRU-AUX-4) to exceed the limits of 250 ppm corrected to 0% O_2, on a dry basis, per rolling 12-hour average. CHS shall operate and maintain the TGTU on the Zone A SRU to limit SO_2 emissions from the Zone A SRU-AUX4 stack to no more than 200 ppm corrected to 0% O_2on a dry basis, per rolling 12-month average (ARM 17.8.749).

M.10. CHS shall not cause or authorize total NO_x 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 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 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.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).

M.16. 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.17. CHS shall operate and maintain CEMS/CERMS to measure SO_2, O_2, and volumetric flow from the Zone A SRU TGI stack (SRU-AUX-4). Compliance with the emission limitations contained in Section III.M.7-11 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 data is not available as provided in Exhibit A, Section 2(A)(14) of the Stipulation (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003; and 40 CFR 60, Subpart J).

M.18. All gaseous (SO_2 and O_2) CEMS shall be required to comply with quality assurance/quality control procedures in 40 CFR 60, Appendix F and operated in accordance with the performance specifications in 40 CFR 60, Appendix B, Performance Specification 2 and 3 (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003; ARM 17.8.340 and 40 CFR 60 Subpart J).

M.19. 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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

M.20. In order to accurately determine the SO_2 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.1 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 SO_2 (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

M.21. 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).

M.22. 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.

M.23. CHS shall test the SRU-AUX stack for SO_2 annually and for NO_x on an every 5-year basis, or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and 17.8.749).

M.24. 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.25. Compliance with Section III.M.12 shall be accomplished by maintaining the SRU-AUX-4 stack at a height no less than 132 feet (ARM 17.8.1213).

M.26. Compliance with Section III.M.13 shall be accomplished by not firing fuel oil in this unit (ARM 17.8.1213).

Record keeping

M.27. CHS shall perform all source test record keeping in accordance with the appropriate test method and Section III.A.2 (ARM 17.8.106).

M.28. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart J, including for 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).

M.29. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart QQQ (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

M.30. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 63, Subpart UUU (ARM 17.8.342 and 40 CFR 63, Subpart UUU).

M.31. CHS shall maintain records documenting the stack height to demonstrate compliance with Section III.M.12 (ARM 17.8.1213).

M.32. CHS shall maintain records that fuel oil was not fired in this unit to document compliance with Section III.M.26 (ARM 17.8.1213).

M.33. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

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 SO_2 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 SO_2 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, record keeping, 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. Copies of the quarterly emission reports shall be submitted to both the Billings regional office and the Helena office of the Department. 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% 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.M.5-11;

f. Compliance determinations for hourly, 24-hour and annual limits specifically allowed in Section III.M.5-11 (ARM 17.8.749); and

g. Reasons for any emissions in excess of those specifically allowed in Section III.M.5-11 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 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 Billings Regional Office. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO_2 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 results of any source testing that was performed during the reporting period;

b. Certification that the records required by Section III.M.31 & M.32 were maintained;

c. Certification that 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 was maintained;

d. Certification that compliance with 40 CFR 60, Subpart QQQ, was maintained;

e. Certification that compliance with 40 CFR 63, Subpart UUU, was maintained;

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

g. Certification of compliance with Stipulation limits and that quarterly reports were submitted as required by Section III.M.39.

N. EU013 – Steam Generation Units

#1 Fuel Oil Heater, #4 Boiler, #5 Boiler, #9 Boiler, Boiler #10, Boiler #11, and Boiler #12

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
N.1, N.22, N.48, N.54, N.58, N.59	Boilers #10, 11, & 12	40 CFR 60, Subpart Db	40 CFR 60, Subpart Db	40 CFR 60, Subpart Db	Monthly and/or Quarterly
N.2, N.23, N.49, N.54, N.58, N.59	Boilers #10, 11, & 12	40 CFR 60, Subpart GGG	40 CFR 60, Subpart GGG	40 CFR 60, Subpart GGG	Semi-annual
N.3, N.24, N.50, N.54, N.58, N.59	Boiler #12	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	
N.4, N.25, N.53, N.54, N.58, N.59	Fuel Oil	Fuel Oil Cannot be Fired in Boiler #10, #11, or #12. Following initial startup of Boiler #12, Fuel Oil Cannot be Fired in any Refinery Boiler	Certify	Ongoing	
N.5, N.27, N.47, N.54, N.55, N.58, N.59	Opacity- #4 and #5 Boilers	40%	Method 9	As Required by the Department and Section III.A.1	
N.6, N.28, M.56	Shutdown date of #4 and #5 Boilers	December 31, 2011	Written Notification	Within 15 days of actual shutdown	Quarterly
N.7, N.27, N.47, N.54, N.55, N.58, N.59	Opacity - Boiler #9, Boiler #10, Boiler #11, and Boiler #12	20%	Method 9	As Required by the Department and Section III.A.1	Semi-annual
N.8, N.29, N.54, N.56, N.57, N.58, N.59	SO_2 Boiler #10	60 ppmv H_2S in refinery fuel gas, 365-day rolling average; 4.14 tons/rolling 12-calendar month total; 2.53 lb/hr	RFG System H_2S CEMS, see Section B	On-going	Quarterly
N.9, N.30, N.33, N.37, N.39, N.40, N.43, N.47, N.54, N.56, N.58, N.59	NO_x Boiler #10	0.03 lb/MMBtu-HHV, 365-day rolling average; 13.13 tons/rolling 12-calendar month total; 3.0 lb/hr	CEMS	On-going	
			Method 7e and 19	Every 5 Years	
N.10, N.33, N.37, N.47, N.54, N.55, N.56, N.58, N.59	CO Boiler #10	0.05 lb/MMBtu-HHV, 365-day rolling average; 21.88 tons/rolling 12-calendar month total; 5.0 lb/hr	CEMS	On-going	
			Method 10	Every 5 Years	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
N.11, N.26, N.33, N.37, N.47, N.54, N.55, N.56, N.58, N.59	VOC Boiler #10	2.24 tons/rolling 12-calendar month	Firing Only Natural Gas	Ongoing	Quarterly
			Method 18 (when firing RFG)	Every 5 Years	
N.12, N.45, N.52, N.54, N.58, N.59	Boiler #10	Stack height no less than 75 feet from ground level	Certify	On-going	Semi-annual
		Ultra Low NO_x Burners. FGR, steam injection to the flame zone - Operate and Maintain	Method 7e	Every 5 Years	
N.13, N.29, N.54, N.56 - N.59	SO_2 Boiler #11	3.92 lb/hour and 8.59 tons/rolling 12-calendar month	RFG System H_2S CEMS, see Section B	On-going	Quarterly
N.14, N.31, N.34, N.37, N.39, N.41, N.43, N.47, N.54, N.55, N.56, N.58, N.59	NO_x Boiler #11	4.18 lb/hour and 18.3 tons/rolling 12-calendar month	CEMS / F-Factor Calc	On-going	
			Method 7	Annually	
N.15, N.31, N.34, N.37, N.41, N.43, N.47, N.54, N.55, N.56, N.58, N.59	CO Boiler #11	400 ppmvd at 3% O_2 /30-day rolling average; 15.26 lb/hr; and 36.63 tons/rolling 12-calendar month	CEMS	On-going	
			Method 10	Annually	
N.16, N.26, N.36, N.47, N.54, N.55, N.56, N.58, N.59	VOC Boiler #11	4.83 tons/rolling 12-calendar months	Certify	Ongoing	
N.17, N.29, N.54, N.56, N.58, N.59	SO_2 Boiler #12	3.60 lb/hr; 7.88 tons/rolling 12-calender months; 0.05 gr/dscf (81 ppm_{vd}) H_2S rolling 12-month average	RFG System H_2S CEMS, see Section B	On-going	
N.18, N.32, N.35, N.38, N.39, N.42, N.43, N.47, N.51, N.54, N.55, N.56, N.58, N.59	NO_x Boiler #12	4.18 lb/hr; 18.31 tons/rolling 12-calendar months; 0.02 lbs/MMBtu-HHV, rolling 365-calandar day average	CEMS / F-Factor Calc	On-going	Quarterly
			Method 7	Annually	
N.19, N.32, N.35, N.38, N.42, N.43, N.47, N.54, N.55, N.56, N.58, N.59	CO Boiler #12	400 ppmvd at 3% O_2 /30-day rolling average; 15.26 lb/hr; 36.63 tons/rolling 12-calendar months	CEMS	On-going	
			Method 10	Annually	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
N.20, N.26, N.33, N.36, N.47, N.54, N.55, N.56, N.58, N.59	VOC Boiler #12	4.81 tons/rolling 12-calendar months	Certify	Ongoing	Quarterly
N.18, N.21, N.46, N.53, N.54, N.58, N.59	Boiler #12 NO_x Control	Fit with ULNB with FGR	Certify	On-going	Semi-annual
			Method 7	Annually	
N.30, N.31, N.40, N.41, N.42, N.43, N.54, N.58, N.59	CEMS/CERMS Stack flowrate monitors	Operate and Maintain	40 CFR 60, Appendix F	On-going	
			RATA	Annually	

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. These subparts apply to the various pumps, valves, flanges, and other equipment in VOC service within the refinery fuel gas supply lines to Boilers #10, #11, and #12, and any other equipment constructed or modified after January 4, 1983 (ARM 17.8.340; 40 CFR 60, Subpart GGG and Subpart VV).

N.3. 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 subpart applies to Boiler #12 (ARM 17.8.340 and 40 CFR 60, Subpart Ja).

N.4. Fuel oil combustion in all refinery boilers is prohibited (ARM 17.8.749).

N.5. CHS shall not cause or authorize emissions to be discharged into the outdoor atmosphere from the #4 and #5 Boilers 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)).

N.6. By December 31, 2011, CHS shall cease operation of Boilers #4 and #5 (CHS Consent Decree).

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_2S 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 4.18 lb/hour and 18.3 tons/rolling 12-calendar months (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_{vd} 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_2 emissions from Boiler #12 shall not exceed 3.60 lb/hour, 5.84 tons/rolling 12-calendar months, and 60 ppmvd H_2S 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_x emissions from Boiler #12 shall not exceed 4.18 lb/hour, 18.31 tons/rolling 12-calendar months, and 0.02 lbs/MMBtu-HHV, on a rolling 365-calendar day average (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_{vd} 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.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_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. 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 GGG).

N.24. 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.25. Compliance with Section III.N.4 shall be accomplished by not firing fuel oil in Boilers #10, #11, and #12. Following initial startup of Boiler #12, compliance with Section III.N.4 shall be accomplished by not firing fuel oil in any refinery boilers (ARM 17.8.1213).

N.26. 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.27. As required by the Department and Section III.A.1, compliance with the opacity limitations listed in Sections III.N.5 and 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.28. CHS shall provide the Department (both the Billings regional office and the Helena office) with written notification of the shutdown date(s) of Boilers #4 and #5 within 15 days after the actual shutdown date(s) (ARM 17.8.340 and ARM 17.8.749).

N.29. Compliance monitoring for SO_2 limits for Boilers #10, #11, and #12 shall be based upon continuous H_2S 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 NO_x, and O_2 (ARM 17.8.340, and 40 CFR 60, Subpart Db).

N.31. CHS shall operate and maintain CEMS/CERMS on the Boiler #11 stack for NO_x, O_2 , and CO (ARM 17.8.1213, ARM 17.8.340, and 40 CFR 60, Subpart Db).

N.32. CHS shall operate and maintain CEMS/CERMS on the Boiler #12 stack for NO_x (ARM 17.8.340 and 40 CFR 60, Subpart Db); O_2 (ARM 17.8.340 and 40 CFR 60, Subpart Db); and CO (ARM 17.8.1213).

N.33. Boiler #10 shall be tested for NO_x, CO, and VOC concurrently (using Methods 7, 10, 18, and 19 respectively, 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 (ARM 17.8.105 and ARM 17.8.106).

N.34. Boiler #11 shall be tested for NO_x, and CO concurrently (using Methods 7 and 10, respectively, in accordance with Section III.A.2 (ARM 17.8.106)) annually, or another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.106).

N.35. Boiler #12 shall be tested annually, or according to another testing/monitoring schedule as may be approved by the Department, for NO_x and CO concurrently, and the results submitted to the Department in order to demonstrate compliance with the NO_x and CO emission limits contained in Sections III.N.18 and III.N.19 (ARM 17.8.105 and ARM 17.8.749).

N.36. 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 the emission factor as specified in Section III.B (ARM 17.8.1213).

N.37. In addition to the testing required in Sections III.N.33 and 34, compliance monitoring for NO_x, CO, and VOC emission limits for Boiler #10, and for NO_x and CO for Boiler #11, 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 (ARM 17.8.749).

N.38. In addition to the testing required in Section III.N.35, compliance monitoring for NO_x and CO emission limits for Boiler #12, shall be based upon actual fuel burning rates and the emission factors developed from the most recent compliance source test. New emission factors shall become effective within 60 days after the completion of a source test. The volumetric stack flow rate monitor shall be used in conjunction with the NO_x CEM to determine compliance with the lb/hr NO_x limit contained in Section III.N.18 (ARM 17.8.1213).

N.39. With exception to the initial performance test periods for Boilers #10, #11, and #12, compliance will 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 in Boilers #10, #11, and #12. The method of compliance monitoring involving F-factor statistical significance is subject to change upon agreement with the Department and CHS (40 CFR 60, Appendix A, Reference Method 19).

N.40. Boiler #10's continuous NO_x and O_2 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.41. 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, Subparts J, 60.100-108, and Appendix B, Performance Specifications 2, 3, 4 or 4A, 6, and Appendix F (ARM 17.8.1213 and ARM 17.8.749).

N.42. 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, Subparts J, 60.100-108, and 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.43. 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.44. 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.45. Compliance with Section III.N.12 shall be accomplished by ensuring that Boiler #10 operates with low NO_x burners and the FGR system, and that the stack remains at a height no less than 75 feet above ground level (ARM 17.8.1213).

N.46. Compliance with Section III.N.21 shall be accomplished by ensuring that Boiler #12 operates with ultra low NO_x burners and the FGR system (ARM 17.8.1213).

Record keeping

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

N.48. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart Db (ARM 17.8.340 and 40 CFR 60, Subpart Db).

N.49. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subpart GGG).

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

N.51. CHS shall maintain records that fuel oil was not fired in Boilers #10, #11, & #12, to document compliance with Section III.N.25 (ARM 17.8.1213).

N.52. CHS shall maintain records that Boiler #10 operated with low NO_x burners and the FGR system and that the stack remained at a height no less than 75 feet above ground level to document compliance with Section III.N.45 (ARM 17.8.1213).

N.53. CHS shall maintain records that Boiler #12 operated with ULNBs and the FGR system to document compliance with Section III.N.46 (ARM 17.8.1213).

N.54. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

N.55. 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.56. CHS shall submit quarterly emission reports to the Department within 30 days of the end of each calendar quarter. Copies of the quarterly emission reports shall be submitted to both the Billings Regional Office and the Helena office of the Department. The quarterly report shall include the following (ARM 17.8.749):

a. SO_2 emission data from the refinery fuel gas system continuous H_2S concentration monitor and continuous fuel gas flow rate meter required by Section B. The SO_2 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. NO_x emission data from the CEMS, fuel gas flow rate meter, and emission factors developed from the most recent compliance source test. The NO_x 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 #12)
v. Daily average and maximum lb/hr (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 Section III.N.8-20;

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

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

N.57. 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 Billings Regional Office. The quarterly report format shall consist of both a comprehensive electronic-magnetic report and a written or hard copy data summary report (Billings/Laurel SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002, and May 22, 2003).

N.58. The annual compliance certification report required by Section V.B must contain a certification statement for the above applicable requirements.

N.59. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification that the records required by Section III.N.51 & N.52 were maintained;

c. Certification that compliance with 40 CFR 60, Subpart Db was maintained;

d. Certification that compliance with 40 CFR 60, Subpart GGG was maintained;

e. Certification of compliance with unit emission limits and conditions of this section and that quarterly reports were submitted as required by Section III.N.56; and

f. Certification of compliance with Stipulation limits and that quarterly reports were submitted as required by Section III.N.57.

O. EU014 – Tank Farm (non-Wastewater)

- *MACT Group 1 Storage Vessels*
- *MACT Group 2 Storage Vessels*
- *Exempt – pressure vessels*
- *Exempt – not organic HAP*
- *Exempt – not refining*

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
O.1, O.14, O.24, O.32, O.36, O.37	Tanks 126, 127, 135-138, and 142-143)	40 CFR 60, Subpart Kb	40 CFR 60.113b and/or 40 CFR 60.114b	As specified	Semi-annual
O.2, O.15, O.23, O.25, O.32, O.33, O.36, O.37	Tanks 121, 122, 126, 127 & 133	40 CFR 60, Subpart UU	40 CFR 60, Subpart UU	As Required by Department and Section III.A.1	Semi-Annual
O.3, O.4, O.16, O.23, O.26, O.27, O.32, O.33, O.34, O.35, O.36, O.37	VOC Tanks 135 & 136	12.6 tons/rolling 12-calendar month	EPA TANKS software	Monthly	Quarterly
O.5, O.6, O.17, O.23, O.28, O.32, O.33, O.34, O.35, O.36, O.37	VOC Tank 133	12.3 tons/rolling 12-calendar month	EPA TANKS software	Monthly	Quarterly
O.7, O.18, O.19, O.29, O.30, O.32, O.33, O.36, O.37	Monitoring and Maintenance program	40 CFR 60, Subpart VVa - Monitoring and Maintenance program or LDAR program	40 CFR 60, Subpart VVa, 40 CFR 60, Subpart GGGa	40 CFR 60, Subpart VVa, 40 CFR 60, Subpart GGGa	Semi-Annual
O.8, O.15, O.32, O.33, O.36, O.37	Opacity	20% - Averaged over 6 consecutive minutes.	Method 9	As Required by the Department and Section III.A.1	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
O.9, O.15, O.32, O.33, O.36, O.37	Opacity Tank 133	20% - Averaged over 6 consecutive minutes. Except when 40 CFR UU is applicable.	Method 9	As Required by the Department and Section III.A.1	
O.10, O.20-O.22, O.31, O.32, O.36, O.37	Group 1 Storage Vessels	40 CFR 63, Subpart CC	40 CFR 63.646	40 CFR 63.646	40 CFR 63.654
O.10, O.20 – O.21, O.31, O.32, O.36, O.37	Equipment Leaks	40 CFR 63, Subpart CC	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	Semi-annual
O.10, O.20 – O.22, O.32, O.36, O.37	Equipment Leaks	Monitoring and Maintenance Plan	Log	During Performance of Program	Semi-annual
O.11, O.16, O.32, O.36, O.37	Tanks 137, 138, 142, 143	Internal floating roof and submerged fill piping	Recordkeeping	On-going	Semi-annual
O.12, O.16, O.32, O.36, O.37	Tank 139	Fixed roof with pressure/vacuum vents and submerged fill (#1 and #2 diesel fuel only)	Recordkeeping	On-going	Semi-annual
O.13, 0.16, O.26, O.32, O.35, O.36, O.37	VOC limit	39.23 tons/rolling 12-calendar month	EPA TANKS software/Calculations	Monthly	Quarterly

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. These requirements shall be as specified in 40 CFR 60.110b through 60.115b. (The affected tanks include but are not limited to: Tanks 126, 127, 135-139 and 142-143) (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 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 includes, but may not be limited to, fugitive emission components in VOC service that are associated with Tanks 133, 135-143 and additive tanks 1-4) (ARM 17.8.752).

O.8. 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. Except where 40 CFR 60, Subpart UU is applicable, CHS shall not cause or authorize emissions from Tank 133 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.10. 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 VV applies to the various pumps, valves, flanges, and other equipment in organic HAP service within the Tank Farm and any other MACT tanks. Subpart CC applies to, but is not limited to, all Group 1 Storage Vessels (ARM 17.8.342 and 40 CFR 63, Subpart CC; ARM 17.8.340; and 40 CFR 60, Subpart VV).

O.11. 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.12. 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.13. 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 (135-143 and Additive Tanks # 1-4), the proposed new propane loading rack, 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).

Compliance Demonstration

O.14. 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.15. As required by the Department and Section III.A.1, compliance with the opacity limitations shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.749, ARM 17.8.340, 40 CFR 60, Subpart UU, and ARM 17.8.1213).

O.16. Combined VOC emissions from Storage Tanks 135-139, 142-143 and Additive Tanks 1-4 shall be calculated and monitored utilizing the EPA TANKS software 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.17. VOC emissions from Storage Tank 133 shall be calculated and monitored utilizing the EPA TANKS software with key parameters of throughput and material properties (ARM 17.8.749).

O.18. CHS shall meet all the applicable requirements of 40 CFR 60, Subpart GGGa (ARM 17.8.1213).

O.19. 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.20. 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.21. CHS shall institute the monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV and 40 CFR 63, Subpart CC (ARM 17.8.340 and 40 CFR 60, Subpart VV; and ARM 17.8.342 and 40 CFR 63, Subpart CC).

O.22. CHS shall maintain a log, 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 60, Subpart VV).

Record keeping

O.23. CHS shall perform all source test record keeping in accordance with the appropriate test method and Section III.A.2 (ARM 17.8.106).

O.24. 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.25. CHS shall maintain records to demonstrate compliance with 40 CFR 60, Subpart UU (ARM 17.8.340 and 40 CFR 60, Subpart UU).

O.26. CHS shall document, by month, the total VOC emissions from Storage Tanks 135-143; 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.15 and III.O.13, as applicable (ARM 17.8.749).

O.27. 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.28. 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.29. CHS shall comply with the record keeping requirements of 40 CFR 60 Subpart GGGa for applicable tanks (Tanks 133, 135-143 and additive tanks 1-4) (ARM 17.8.749).

O.30. Except for requirements specifically exempted in 40 CFR 60, Subpart GGGa, CHS shall comply with the applicable monitoring and maintenance program record keeping requirements of 40 CFR 60 Subpart VVa for Tanks 133, 135-143 and additive tanks 1-4) (ARM 17.8.749).

O.31. CHS shall comply with the record keeping requirements of 40 CFR 63.646 (ARM 17.8.342 and 40 CFR 63, Subpart CC).

O.32. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

O.33. 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.34. CHS shall prepare and submit a quarterly emission report within 30 days of the end of each calendar quarter. Copies of the quarterly emission report shall be submitted to both the Billings regional office and the Helena office of the Department. 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.35. CHS shall prepare and submit a quarterly emission report within 30 days of the end of each calendar quarter. Copies of the quarterly emission report shall be submitted to both the Billings regional office and the Helena office of the Department. The quarterly report shall also include the applicable 12-month rolling total VOC emissions, by month, as required in III.O.13 and III.O.15 (17.8.1212).

O.36. 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.37. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification of compliance with emission limits and that quarterly reports were submitted as required by Section III.O.34;

c. Certification that compliance with 40 CFR 60, Subpart Kb was maintained;

d. Certification that compliance with 40 CFR 60, Subpart UU was maintained;

e. Certification that compliance with 40 CFR 63, Subpart CC, was maintained;

f. Certification that compliance with 40 CFR 63, Subpart VV, was maintained; and

g. Certification that compliance with the monitoring and maintenance program requirements of 40 CFR 60, Subpart VVa meeting the requirements of 40 CFR 60 Subpart GGGa (except for requirements specifically exempted), was maintained.

P. EU015– Transfer Facilities

Asphalt Loading Heater #1, Truck Loading Rack Vapor Combustion Unit (VCU), New Truck Loading Rack and VCU, Railcar Product Loading Rack VCU

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
P.1, P.17, P.18, P.34, P.35, P.38, P.39, P.40, P.41, P.42	Truck & Railcar Product Loading Racks and VCUs	40 CFR 63, Subpart CC	40 CFR 63, Subpart CC and	40 CFR 63, Subpart CC	Semi-annual
P.2, P.17, P.18, P.19, P.20, P.34, P.35, P.36, P.38, P.41, P.42	Product Loading Racks and VCUs	Operate and Maintain as Listed	40 CFR 63, Subpart CC	40 CFR 63, Subpart CC	Semi-annual
		Existing VCU Stack – 35 Feet Above Grade/New VCU Stack – at least 40 feet above grade	Certify	Ongoing	
P.3, P.21, P.22, P.24, P.34, P.38, P.39, P.41, P.42	VOC	10 mg/L of Gasoline Loaded	40 CFR 63.425	Every 5 Years	
P.4, P.23, P.24, P.31, P.34, P.38, P.39, P.41, P.42	CO	10 mg/L of Gasoline Loaded	Method 10	As Required by the Department and Section III.A.1	
P.5, P.23, P.24, P.34, P.38, P.39, P.41, P.42	NO_x	4 mg/L of Gasoline Loaded	Method 7	As Required by the Department and Section III.A.1	
P.6, P.25, P.34, P.38, P.39, P.41, P.42	PM from Railcar Light Product Loading Rack	0.10 gr/dscf corrected to 12% CO_2	Method 5	As Required by the Department and Section III.A.1	
P.7, P.26, P.34, P.38, P.39, P.40, P.41,	Opacity from Truck Loading Racks and VCUs	20%	Method 9	As Required by the Department and Section III.A.1	
P.8, P.26, P.34, P.38, P.39, P.41, P.42	Opacity from Railcar Loading Rack VCU	10%	Method 9	As Required by the Department and Section III.A.1	
P.9, P.10, P.27, P.28, P.37, P.38, P.41, P.42	Device to Detect Presence of a Flame (VCU flares)	Operate and Maintain	Certify	Ongoing	
P.11, P.29, P.38, P.40, P.41, P.42	Equipment Leaks of VOC	40 CFR 60.482-1 through 60.482- 10	Log	During Performance of Maintenance Program	
P.12, P.30, P.38, P.40, P.41, P.42	Equipment Leaks of VOC	40 CFR 60, Subpart VVa, and meeting the requirements of 40 CFR 60, Subpart GGGa	Log	During Performance of Maintenance Program	Semi-Annual
P.13, P.31, P.34, P.38, P.39, P.41, P.42	Truck & Railcar Product Loading Racks and VCUs	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	Semiannual
P.14, P.32, P.38, P.41, P.42	Truck & Railcar Product Loading Racks and VCUs	40 CFR 60, Subpart XX	40 CFR 60, Subpart XX	40 CFR 60, Subpart XX	Semiannual

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
P.15, P.22, P.33, P.38, P.39, P.41, P.42	Truck & Railcar Product Loading Racks and VCUs	VOC limit of 39.23 TPY	Recordkeeping	On-going	Semiannual
P.16, P.20, P.38, P.41, P.42	New Truck Loading Rack and VCU	CHS shall provide the Department with written notification of actual construction and actual startup	Notification	Begin construction Startup	Semiannual

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 both truck loading racks and vapor combustion units (VCUs), 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. Both truck loading racks 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(e) 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(e).

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 existing truck loading rack VCU stack shall be 35 feet above grade and the new truck loading rack VCU stack shall be at least 40 feet above grade (ARM 17.8.749).

P.3. The total VOC emissions to the atmosphere from either the truck loading VCUs 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 17.8.342and ARM 17.8.752).

P.4. The total CO emissions to the atmosphere from either the truck loading VCUs 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.5. The total NO_x emissions to the atmosphere from either the truck loading VCUs 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.6. The total PM emissions from the atmosphere from the railcar light product loading VCU shall not exceed 0.10 gr/dscf corrected to 12% CO_2 (ARM 17.8.752).

P.7. CHS shall not cause or authorize to be discharged into the atmosphere from either of the enclosed truck loading rack VCUs any visible emissions that exhibit an opacity of 20% or greater 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)).

P.8. 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.9. CHS shall continuously operate and maintain a thermocouple and an associated recorder, or an ultraviolet flame detector and relay system, which will render the truck loading racks inoperable if a flame is not present at the VCU flare tip, or any other equivalent device to detect the presence of a flame (ARM 17.8.342 and ARM 17.8.752).

P.10. 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.11. 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; 40 CFR 63 Subpart CC; ARM 17.8.340; and 40 CFR 60, Subpart VV).

P.12. 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 (ARM 17.8.749 and ARM 17.8.340).

P.13. 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.14. 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.15. The total annual VOC emissions from the new truck loading rack, VCU and associated equipment (which includes all associated storage tanks (135-143 and Additive Tanks # 1-4), the new propane loading rack, 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 135-143 and Additive tanks #1-4) in Section O (ARM 17.8.749).

P.16. CHS shall provide the Department with written notification (both the Billings regional office and the Helena office) when CHS begins actual construction of the new Truck Loading Rack and VCU within 30 days after actual construction has begun, and written notification of the actual start-up date of the new Truck Loading Rack and VCU within 15 days after the actual start-up (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; 40 CFR 63, Subpart CC; and 40 CFR 63, Subpart R).

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; 40 CFR 63, Subpart CC; and 40 CFR 63, Subpart R).

P.19. Compliance with Section III.P.2.j. shall be accomplished by ensuring that the existing truck loading rack VCU stack is no less than 35 feet above grade and the new VCU stack is no less than 40 feet above grade (ARM 17.8.1213).

P.20. 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.21. The truck loading rack VCUs 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; 40 CFR 63, Subpart CC; and 40 CFR 63, Subpart R).

P.22. The new VCU shall be initially tested for VOCs, and compliance monitored with the emission limitation contained in Section III.P.5 within 180 days of initial startup followed by continued testing every 5 years, or according to 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; 40 CFR 63, Subpart CC; and 40 CFR 63, Subpart R).

P.23. The truck loading racks and railcar light product loading rack VCUs shall each be initially tested for CO and NO_x, 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 NO_x emission limitations contained in Section III.P.4 and 5 as required by the Department (ARM 17.8.105).

P.24. 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.25. CHS shall monitor compliance with Section III.P.6 by conducting a Method 5 stack test, as required by the Department (ARM 17.8.1213).

P.26. As required by the Department and Section III.A.1, compliance with the opacity limitations listed in Sections III.P.7 and III.P.8 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

P.27. Compliance with Section III.P.9 shall be accomplished by maintaining a thermocouple and an associated recorder, or an ultraviolet flame detector and relay system, which will render the truck loading rack inoperable if a flame is not present at the VCU flare tip, or any other equivalent device, to detect the presence of a flame (ARM 17.8.1213).

P.28. Compliance with Section III.P.10 shall be accomplished 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.29. CHS shall maintain a log, 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 17.8.340 and 40 CFR 60, Subpart VV).

P.30. CHS shall maintain a log, 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 shall be instituted (ARM 17.8.749 and ARM 17.8.340).

P.31. 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.32. 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.33. CHS shall demonstrate compliance with the limit in Section III.P.15 by calculating and tracking actual VOC emissions monthly for the rolling 12-month total VOC emissions (ARM 17.8.749).

Record keeping

P.34. All source test record keeping shall be performed in accordance with the appropriate test method being used and Section III.A.2 (ARM 17.8.106).

P.35. CHS shall keep records 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 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.36. CHS shall maintain records that the VCU stacks meet the requirements of Section III.P.2.j (ARM 17.8.1213).

P.37. CHS shall maintain records that:

a. A thermocouple and an associated recorder, or an ultraviolet flame detector and relay system, which will render the truck 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 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.28 (ARM 17.8.1213).

P.38. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

P.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).

P.40. 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.41. 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.42. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period;

b. A summary that details the status of the new truck loading rack and VCU;

c. Certification that the records required by Section III.P.35- 37 were maintained;

d. Certification that compliance with 40 CFR 63, Subpart CC, was maintained

e. Certification that compliance with 40 CFR 60, Subpart Ja, was maintained;

f. Certification that compliance with 40 CFR 60, Subpart XX, was maintained;

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

Q. EU016 – Wastewater Treatment Units

Wastewater Treatment Unit (New):
- *T-23A/B HDS API Separator*
- *Associated downstream facilities.*

Wastewater Treatment Unit (Old):
- *Wastewater storage, separation and biological treatment facilities that were in place before the project that installed the "Wastewater Treatment Unit (New)" was completed.*

Wastewater Tanks:
- *Tank 23 and Tank 25 – wastewater storage tanks*
- *Tank 44 and Tank 118 – slop oil storage tanks*
- *Tank 119 – receives foam and solids from the existing DAF*
- *Tank 128 and Tank 129 – sour water storage tanks*

Wastewater Separators:
- *Desalter Wastewater Three Phase Separator(s)*
- *API Separator(s)*
- *CPI Separator(s)*
- *Dissolved Air Flotation (DAF) Units*

New Wastewater Treatment Unit Vessels

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
Q.1, Q.6, Q.10, Q.16, Q.19, Q.20	Wastewater Treatment	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	Semi-annual
Q.2, Q.7, Q.11, Q.15, Q.17, Q.19, Q.20	Tanks 118	40 CFR 60 Subpart Kb	40 CFR 60.113b and/or 40 CFR 60.114b	As Specified	
Q.3, Q.8, Q.13, Q.15, Q.19, Q.20	Tank 128 & 129	Internal floating roof and submerged fill.	Certify	Semi-annually	
Q.4, Q.9, Q.14, Q.15, Q.19, Q.20	Desalter Wastewater Three Phase Separator(s)	Vapor collection system	Certify	Semi-annually	Semi-annual Written notification of start-up date within 15 days after the actual start-up date
Q.5, Q.9, Q.14, Q.15, Q.19, Q.20	API & CPI Separator(s), DAF Units	Vapor collection system (95% VOC reduction)	Certify	Semi-annually	
Q.12, Q.16, Q.19, Q.20	Tank 128 & 129 (Group 2 Storage Vessels)	Record keeping & Reporting	40 CFR 63, Subpart CC	40 CFR 63, Subpart CC	Semi-annual

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 the Wastewater Treatment Unit (New), 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. The Desalter Wastewater Three Phase Separator(s) shall be equipped with a vapor collection system to return emissions from the enclosed vapor space to the process (ARM 17.8.752).

Q.5. CHS shall equip, operate, and maintain the API Separator(s), CPI Separator(s) and the DAF Units with a vapor collection system to collect and route emissions from the enclosed vapor space to a carbon adsorption system, designed and operated to reduce VOC emissions by 95% or greater (ARM 17.8.340, ARM 17.8.752, 40 CFR 60, Subpart QQQ).

Compliance Demonstration

Q.6. 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 Wastewater Treatment Unit (New) and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

Q.7. 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.8. Compliance with Section III.Q.3 shall be accomplished by maintaining the submerged fill and internal floating roofs on the sour water storage tanks (ARM 17.8.1213).

Q.9. 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). Both of these conditions shall be completed to demonstrate compliance with Section III.Q.5.

Record keeping

Q.10. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart QQQ (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

Q.11. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60.115b and 40 CFR 60.116b (ARM 17.8.340 and 40 CFR 60, Subpart Kb).

Q.12. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 63, Subpart CC (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Q.13. 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.8 (ARM 17.8.1213).

Q.14. CHS shall maintain records that CHS monitored the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system(s) in accordance with Section III.Q.9 and replaced the existing carbon with fresh carbon immediately when carbon breakthrough had been indicated (ARM 17.8.1213).

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

Reporting

Q.16. CHS shall submit reports in accordance with 40 CFR 63, Subpart CC (ARM 17.8.342 and 40 CFR 63, Subpart CC).

Q.17. CHS shall submit reports in accordance with 40 CFR 60.115b (ARM 17.8.340 and 40 CFR 60, Subpart Kb).

Q.18. CHS shall provide the Department (both the Billings regional office and the Helena office) with written notification of the actual start-up date of the Wastewater Three-Phase Separator(s), API Separator(s), CPI Separator(s), and DAF Units within 15 days after the actual start-up date (ARM 17.8.1212).

Q.19. 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.20. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. Certification that the records required by Section III.Q.10 through Section III.Q.14 were maintained;

b. A summary of reporting done to conform to requirements of 40 CFR 60, Subpart QQQ; and

c. A summary of reporting done to conform to requirements of 40 CFR 63, Subpart CC.

d. A summary of reporting done to conform to requirements of 40 CFR 60, Subpart Kb, including certification that the testing procedures of 60.113b and/or 114b were followed.

R. EU017 – Flare Systems

Refinery flare (existing) and Coker Unit Flare

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
R.1, R.7, R.12, R.16, R.17, R.19, R.20	Refinery Flare - Opacity	40%	Method 9	As Required by the Department and Section III.A.1	Semi-annual
R.2, R.7, R.12, R.16, R.17, R.19, R.20	Coker Unit Flare - Opacity	20%	Method 9	As Required by the Department and Section III.A.1	
R.3, R.8, R.9, R.13, R.16, R.19, R.20	Flares - HAPs	40 CFR 63, Subpart CC	40 CFR 63, Subpart CC	40 CFR 63, Subpart CC	
R.4, R.5, R.10, R.14, R.16, R.18, R.19, R.20	SO_2	Minor Flaring and 150 lbs/3-hr	Reporting & Corrective Action	As Necessary	At Least Quarterly and as Necessary
R.6, R.11, R.15, R.16, R.19, R.20	Refinery flare and Coker Unit Flare	Continuous Pilot Flame	40 CFR 60.18 and 40 CFR 63.11	On-going	Semi-annual

Conditions

R.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)).

R.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)). 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)).

R.3. CHS shall comply with all applicable requirements of 40 CFR 63, Subpart CC, NESHAPs From Petroleum Refineries, including compliance with specific control device requirements under 40 CFR 63.11 (ARM 17.8.342; 40 CFR 63, Subpart CC).

R.4. CHS shall not allow SO_2 emissions from any flare, unless the emissions are a minor flaring event, or are the result of start-up, shutdown, or a malfunction as defined in ARM 17.8.110. A minor flaring event means a flaring event that emits less than or equal to 150 pounds of SO_2 per 3-hour period Board Order signed on June 12, 1998, and subsequent revisions of March 17, 2000; this requirement is “State Only”).

R.5. Except for minor flaring events, CHS shall minimize SO_2 emissions from 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.6. The refinery flare and the Coker Unit flare shall each operate with a continuous pilot flame and a continuous pilot flame-operating device and meet applicable control device requirements of 40 CFR 60.18 and 40 CFR 63.11 (ARM 17.8.752; ARM 17.8.340 and 40 CFR 60, Subpart J; and ARM 17.8.342 and 40 CFR 63.11).

Compliance Demonstration

R.7. As required by the Department and Section III.A.1, compliance with the opacity limitations listed in Section III.R.1 and R.2 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

R.8. CHS shall institute a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV and 40 CFR 63, Subpart CC (ARM 17.8.340 and 40 CFR 60, Subparts VV; and ARM 17.8.342 and 40 CFR 63, Subpart CC).

R.9. CHS shall maintain a log, 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 VV).

R.10. For purposes of determining whether a flaring event greater than 150 pounds of SO_2 per 3-hour period has occurred, CHS shall maintain records of all activities, other than de minimis activities, that result in SO_2 emissions from the flare (Board Order signed on June 12, 1998, and subsequent revisions of March 17, 2000; this requirement is "State Only").

R.11. The refinery flare and the Coker Unit flare shall each be monitored to ensure the presence of a flare pilot flame using a thermocouple or any other equivalent device as required by 40 CFR 60.18(f)(2) (ARM 17.8.340 and 40 CFR 60, Subpart J).

Record keeping

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

R.13. CHS shall conduct record keeping in accordance with 40 CFR 63, Subpart CC, including record keeping for equipment leaks performed in accordance with 40 CFR 60.486 and 40 CFR 63.654 (ARM 17.8.340; 40 CFR 60, Subpart VV; ARM 17.8.342 and 40 CFR 63, Subpart CC).

R.14. 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.15. CHS shall maintain records of the refinery flare monitoring (ARM 17.8.340 and 40 CFR 60, Subpart J).

R.16. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

R.17. Any compliance source test reports must be submitted in accordance with Section III.A.2 (ARM 17.8.106 and ARM 17.8.1212).

R.18. 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.19. 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.20. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification that compliance with 40 CFR 63, Subpart CC was maintained;

c. A summary of the refinery flare monitoring; and

d. Certification of compliance with Stipulation limits and that reports were submitted as required by Section III.R.18.

S. EU018 – RCRA Units

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
S.1, S.2, S.3, S.4, S.5, S.6 S.7	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	Semi-annual

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).

Record keeping

S.3. All source test record keeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

S.4. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

S.5. 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.6. 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.7. The semiannual monitoring report shall provide a summary of results of any source testing that was performed during the reporting period (ARM 17.8.1212).

T. EU019 – Cooling Towers

Cooling Tower #1, #2, #3, #5 and #6(Coker Cooling Tower)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
T.1, T.4, T.6, T.8 - T.11	Opacity	40%	Method 9	As Required by the Department and Section III.A.1	Semi-annual
T.2, T.4, T.6, T.8 - T.11	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	
T.3, T.5, T.7, T.8, T.10, T.11	PM_{10}	PM_{10} no more than 0.002% of circulating water flow	Certify	On-going	

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).

Compliance Demonstration

T.4. As required by the Department and Section III.A.1, compliance with the opacity limitations listed in Section III.T.1 and 2 shall be determined using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

T.5. Compliance with Section III.T.3 shall be accomplished by operating and maintaining the mist eliminator as designed (ARM 17.8.1213).

Record keeping

T.6. All source test record keeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

T.7. 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.5 (ARM 17.8.1213).

T.8. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

T.9. 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.10. 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.11. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period; and

b. Certification that records required by Section III.T.7 were maintained.

U. EU020 – Saturate Gas Concentration Unit – *combined with EU002*

V. EU021 – ULSD Unit (900 Unit) and Hydrogen Plant (1000 Unit)
Reactor Charge Heater (H-901), Fractionator Reboiler (H-902), and Hydrogen Reformer Heater (H-1001)

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
V.1, V.29, V.44, V.51, V.52, V.54, V.55	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	Semi-annual
V.2, V.30, V.44, V.45, V.51, V.52, V.54, V.55	ULSD Unit Heaters (H-901 and H-902) and Hydrogen Reformer Heater (H-1001) prior to retrofit for the RFG requirements	40 CFR 60, Subpart J	40 CFR 60, Subpart J	40 CFR 60, Subpart J	
V.3, V.31, V.44, V.46, V.51, V.52, V.54, V.55	Following retrofit, Hydrogen Reformer Heater (H-1001)	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	40 CFR 60, Subpart Ja	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
V.4, V.33, V.47, V.51, V.54, V.55	ULSD Unit and Hydrogen Plant Piping	40 CFR 60, Subpart GGG	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	Semi-annual
V.5, V.32, V.48, V.51, V.54, V.55	ULSD Unit and Hydrogen Plant Process Drains	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	
V.6, V.33, V.49, V.51, V.54, V.55	ULSD Unit and Hydrogen Plant Piping in HAP Service	40 CFR 63, Subpart CC	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	
V.7, V.34, V.50, V.51, V.54, V.55	Reactor Charge Heater (H-901), Fractionation Heater (H-902), and Hydrogen Reformer Heater (H-1001)	Fuel Oil will not be fired in these units.	Certify	Monthly	
V.8, V.35, V.43, V.51, V.52, V.54, V.55	SO_2 Emissions from Reactor Charge Heater (H-901)	1.96 tons/rolling 12-calendar month total and 0.90 lb/hr	RFG System H_2S CEMS, see Section B	On-going	
V.9, V.37, V.44, V.51, V.52, V.53, V.54, V.55	NO_x Emissions from Reactor Charge Heater (H-901)	2.19 tons/rolling 12-calendar month total and 0.50 lb/hr	Method 7	Every Two Years	Quarterly
V.10, V.37, V.44, V.51, V.52, V.53, V.54, V.55	CO Emissions from Reactor Charge Heater (H-901)	9.00 tons/rolling 12-calendar month total and 2.05 lb/hr	Method 10	Every Two Years	Quarterly
V.11, V.36, V.51, V.52, V.53, V.54, V.55	VOC Emissions from Reactor Charge Heater (H-901)	0.59 tons/rolling 12-calendar month total	Emission Calculations, see Section B	On-going	
V.12, V.35, V.43, V.51, V.52, V.53, V.54, V.55	SO_2 Emissions from Fractionator Reboiler (H-902)	3.95 tons/rolling 12-calendar month total and 1.80 lb/hr	RFG System H_2S CEMS, see Section B	On-going	
V.13, V.38, V.44, V.51, V.52, V.53, V.54, V.55	NO_x Emissions from Fractionator Reboiler (H-902)	4.40 tons/rolling 12-calendar month total and 1.00 lb/hr	Method 7	Every Two Years	
V.14, V.38, V.44, V.51, V.52, V.53, V.54, V.55	CO Emissions from Fractionator Reboiler (H-902)	1.94 lb/hr and 8.50 tons/rolling 12-calendar month total	Method 10	Every Two Years	
V.15, V.36, V.51, V.52, V.53, V.54, V.55	VOC Emissions from Fractionator Reboiler (H-902)	1.19 tons/rolling 12-calendar month total	Emission Calculations, see Section B	On-going	
V.16, V.35, V.43, V.45, V.51, V.52, V.53, V.54, V.55	SO_2 Emissions from Heater (H-1001)	12.69 tons/rolling 12-calendar month total and 5.80 lb/hr	RFG System H_2S CEMS, see Section B	Annual	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
V.17, V.41, V.44, V.51, V.52, V.53, V.54, V.55	NOx Emissions from Reformer Heater (H-1001)	28.31 tons/rolling 12-calendar month total and 6.46 lb/hr	Method 7	Annual	Quarterly
V.18, V.41, V.43, V.44, V.51, V.52, V.53, V.54, V.55	CO Emissions from Reformer Heater (H-1001)	14.15 tons/rolling 12-calendar month total, 3.23 lb/hr, and 400 ppm_{vd} at 3% O_2/30-day rolling average.	CEMS	On-going	
			Method 10		
V.19,V.36, V.51, V.52, V.53, V.54, V.55	VOC Emissions from Reformer Heater (H-1001)	3.82 tons/rolling 12-calendar month total	Emission Calculations, see Section B	On-going	
V.20, V.39, V.51, V.53, V.54, V.55	Following retrofit, Reformer Heater (H-1001)	ULNB	RATA	Annual	
		191.84 MMBtu/hr-HHV			
V.21, V.40, V.51, V.54, V.55	Following retrofit, Reformer Heater (H-1001)	burn all available PSA Tailgas	Recordkeeping	On-going	
V.22, V.40, V.46, V.51, V.52, V.53, V.54, V.55	Following retrofit, H_2S Emissions from Reformer Heater (H-1001)	60 ppmv	RFG System H_2S CEMS, see Section B	On-going	
V.23, V.24, V.25, V.41, V.42,V.43, V.44 V.46, V.51, V.52, V.53, V.54, V.55	Following retrofit, NOx Emissions from Reformer Heater (H-1001)	29.4 tons/rolling 12-calendar month total or 0.035 lb/MMBtu-HHV	Method 7/CEMS	Annual/On-going	
		40 ppmv/30-day rolling			
		0.04 lb/MMBtu-HHV or 7.7 lb/hr based on hourly rolling 24-hr average			
V.26, V.28, V.42, V.44, V.51, V.52, V.53, V.54, V.55	Following retrofit, CO Emissions from Reformer Heater (H-1001)	0.02 lb/MMBtu-HHV, or 16.8 tons/rolling 12-calendar month total	CEMS	On-going	
			Method 10	Annual	
V.27, V.28, V.43, V.44, V.51, V.52, V.53, V.54, V.55	Following retrofit, CO Emissions from Reformer Heater (H-1001)	0.04 lb/MMBtu-HHV, or 7.7 lb/hr based on a 24-hour rolling average	CEMs	On-going	
		During startup and shutdown			
V.28, V.36, V.51, V.54, V.55	VOC Emissions from Reformer Heater (H-1001)	Proper design and Good Combustion	On-going		
V.33, V.51, V.54, V.55	Equipment Leaks	Monitoring and Maintenance Plan	Log During Performance of Program	Monthly	Semi-Annual
V.42, V.43, V.45, V.46, V.51, V.54, V.55	H-1001 NO_x, O_2, and CO CEMS/CERMS	Operate and Maintain	40 CFR 60, Appendix F	On-going	Semi-annual
			RATA	Annual	

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 reformer heater (prior to the retrofit), and 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. Following the retrofit, this regulation shall apply to the Reformer heater (H-1001) (ARM 17.8.340 and 40 CFR 60, Subpart Ja).

V.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. These subparts apply to the various pumps, valves, flanges, and other equipment in VOC service within the ULSD Unit and the Hydrogen Plant fugitive piping and any other equipment constructed or modified after January 4, 1983 (ARM 17.8.340; 40 CFR 60, Subpart GGG and Subpart VV).

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; 40 CFR 63, Subpart CC; ARM 17.8.340; and 40 CFR 60, Subpart VV).

V.7. CHS shall not fire fuel oil in H-901, H-902 or H-1001 (ARM 17.8.752, ARM 17.8.340, and 40 CFR 60, Subpart J and 40 CFR 60, Subpart Ja).

V.8. CHS shall not cause or authorize total SO_2 emissions from the Reactor Charge Heater (H-901) to exceed the limits of 1.96 tons/rolling 12-month total or 0.90 lb/hr (ARM 17.8.752).

V.9. CHS shall not cause or authorize total NO_x emissions from the Reactor Charge Heater (H-901) to exceed the limits of 2.19 tons/rolling 12-month total or 0.50 lb/hr (ARM 17.8.752).

V.10. CHS shall not cause or authorize total CO emissions from the Reactor Charge Heater (H-901) to exceed the limits of 9.00 tons/rolling 12-month total or 2.05 lb/hr (ARM 17.8.752).

V.11. CHS shall not cause or authorize total VOC emissions from the Reactor Charge Heater (H-901) to exceed the limit of 0.59 tons/rolling 12-month total (ARM 17.8.752).

V.12. CHS shall not cause or authorize total SO_2 emissions from the Fractionator Reboiler (H-902) to exceed the limits of 3.95 tons/rolling 12-month total or 1.80 lb/hr (ARM 17.8.752).

V.13. CHS shall not cause or authorize total NO_x emissions from the Fractionator Reboiler (H-902) to exceed the limits of 4.40 tons/rolling 12-month total or 1.00 lb/hr (ARM 17.8.752).

V.14. CHS shall not cause or authorize total CO emissions from the Fractionator Reboiler (H-902) to exceed the limits of 8.50 tons/rolling 12-month total or 1.94 lb/hr (ARM 17.8.752).

V.15. CHS shall not cause or authorize total VOC emissions from the Fractionator Reboiler (H-902) to exceed the limit of 1.19 tons/rolling 12-month total (ARM 17.8.752).

V.16. Prior to the burner retrofit of the H-1001 Reformer heater, CHS shall not cause or authorize total SO_2 emissions from the Reformer Heater (H-1001) to exceed the limits of 12.69 tons/rolling 12-month total or 5.80 lb/hr (ARM 17.8.752).

V.17. Prior to the the burner retrofit of the H-1001 Reformer heater, CHS shall not cause or authorize total NO_x emissions from the Reformer Heater (H-1001) to exceed the limits of 28.31 tons/rolling 12-month total or 6.46 lb/hr (ARM 17.8.752).

V.18. Prior to the the burner retrofit of the H-1001 Reformer heater, CHS shall not cause or authorize total CO emissions from the Reformer Heater (H-1001) to exceed the limits of 14.15 tons/rolling 12-month total, 3.23 lb/hr, and 400 ppm_{vd} at 3% oxygen, on a 30-day rolling average (ARM 17.8.752).

V.19. Prior to the the burner retrofit of the H-1001 Reformer heater, CHS shall not cause or authorize total VOC emissions from the Reformer Heater (H-1001) to exceed the limit of 3.82 tons/rolling 12-month total (ARM 17.8.752).

V.20. Following the burner retrofit of the H-1001 Reformer Heater, the unit shall be equipped with ULNB and the firing rate of the H-1001 Reformer Heater shall not exceed 191.84 MMBtu/hr-HHV based on a rolling 30-day average (ARM 17.8.752).

V.21. 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.22. Following the burner retrofit of the H-1001 Reformer Heater, CHS shall not burn in the H-1001 Reformer Heater any fuel gas that contains H_2S 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.23. Following the burner retrofit of the H-1001 Reformer Heater, CHS shall not cause or authorize NOx emissions 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.24. Following the burner retrofit of the H-1001 Reformer Heater, CHS shall not cause or authorize NO_x emissions from the Reformer Heater (H-1001) to exceed 0.035 lb/MMBtu-HHV, or 29.4 tons per rolling 12-calendar month total (ARM 17.8.752).

V.25. Following the burner retrofit of the H-1001 Reformer Heater, CHS shall not cause or authorize NOx emissions from the Reformer Heater (H-1001) to exceed 0.04 lb/MMBtu-HHV, or 7.7 lb/hr based on an hourly rolling 24-hour average (ARM 17.8.752).

V.26. Following the burner retrofit of the H-1001 Reformer Heater, CHS shall not cause or authorize CO emissions from the Reformer Heater (H-1001) to exceed 0.02 lb/MMBtu-HHV or 16.8 tons per rolling 12-calendar month (ARM 17.8.752).

V.27. Following the burner retrofit of the H-1001 Reformer Heater, CHS shall not cause or authorize CO emissions from the Reformer Heater (H-1001) to exceed the limits of 0.04 lb/MMBtu-HHV or 7.7 lb/hr during periods of startup and shutdown, based on a 24-hour rolling average (ARM 17.8.752).

V.28. 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.29. 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.30. 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.31. 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) following the retrofit, and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60, Subpart Ja).

V.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 ULSD Unit and Hydrogen Plant and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

V.33. 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.34. Compliance with Section III.V.7 shall be accomplished by not firing fuel oil in H-901, H-902 or H-1001 (ARM 17.8.1213).

V.35. CHS shall monitor compliance with the SO_2 limits for the Reactor Charge Heater (H-901), Fractionator Reboiler (H-902) and Reformer Heater (H-1001) listed in Sections III.V.8, III.V.12 and III.V.16 through monitoring the volume and H_2S concentration of refinery fuel gas combusted, as specified in Section III.B (ARM 17.8.1213).

V.36. CHS shall monitor compliance with the VOC limit for the Reactor Charge Heater (H-901), Fractionator Reboiler (H-902), and Reformer Heater (H-1001) listed in Sections III.V.11, III.V.15 and III.V.19 through maintaining records of the fuel gas consumed and using the emission factor as specified in Section III.B (ARM 17.8.1213).

V.37. The Reactor Charge Heater (H-901) shall be tested every two 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.9 and 10 (ARM 17.8.105 and ARM 17.8.749).

V.38. The Fractionator Heater (H-902) shall be tested every two 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.13 and 14 (ARM 17.8.105 and ARM 17.8.749).

V.39. Compliance with the firing rate limit in Section III.V.20 shall be accomplished through recordkeeping using fuel gas useage (scfh) and an appropriate fuel gas heat content. The fuel gas content shall be determined using the monthly average heat content for refinery fuel gas. For PSA tailgas, and the average of the last five valid PSA tailgas analyses or the average of all valid PSA tailgas analyses in the month (if greater than five) will be used (ARM 17.8.1213).

V.40. Compliance monitoring for the H_2S limit in Section III.V.22 shall be based upon continuous H_2S concentration monitor data and fuel gas flowmeter data as required in Section III.B (ARM 17.8.1213).

V.41. The Reformer Heater (H-1001) shall be tested annually, or according to another testing/monitoring schedule as may be approved by the Department, for NO_x and CO, concurrently, and the results submitted to the Department in order to demonstrate compliance with the NO_x and CO emission limits contained in Section III.V.19 – III.V.22 (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/O_2 (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.37, compliance with the NOx and CO emission limitations for H-1001 contained in Sections III.V.19 through III.V.23 shall be determined using data from the CEMS (ARM 17.8.1213 and 40 CFR 60, Subpart Ja).

V.43. CEMS/CERMS required by this permit 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).

Record keeping

V.44. All source test record keeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

V.45. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart J (ARM 17.8.340 and 40 CFR 60, Subpart J).

V.46. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart Ja (ARM 17.8.340 and 40 CFR 60, Subpart Ja).

V.47. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subpart GGG).

V.48. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart QQQ (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

V.49. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 63, Subpart CC (ARM 17.8.342 and 40 CFR 63, Subpart CC).

V.50. CHS shall maintain records that fuel oil was not fired in these units, to document compliance with Section III.V.25 (ARM 17.8.1213).

V.51. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

V.52. 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.53. CHS shall submit the quarterly emission reports within 30 days of the end of each reporting period. Copies of the emission reports shall be submitted to both the Billings regional office and the Helena office of the Department. The report shall include the following (ARM 17.8.749, ARM 17.8.340 and 40 CFR 60, Subpart J and 40 CFR 60, Subpart Ja):

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

b. Quarterly fuel gas consumption rates;

c. NOx and CO emissions from the H-1001 stack;

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 III.V.9-20 and V.23 – V.27;

f. Compliance determinations for hourly, 24-hour, 30-day and annual limits specifically allowed in Section III.V.9-20 and V.23 – V.27 (ARM 17.8.749); and

g. Reasons for any emissions in excess of those specifically allowed in Section III.V.9-20 and V.23 – V.27 with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

V.54. 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.55. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification that records required by Section III.V.35 were maintained;

c. Certification that compliance with 40 CFR 60, Subpart J was maintained;

d. Certification that compliance with 40 CFR 60, Subpart Ja was maintained, specifically by determining compliance based on the NOx CEMS on the H-1001 stack;

e. Certification that compliance with 40 CFR 60, Subpart GGG was maintained;

f. Certification that compliance with 40 CFR 60, Subpart QQQ was maintained;

g. Certification that compliance with 40 CFR 63, Subpart CC was maintained; and

h. Certification of compliance with unit emission limits and conditions of this section and that quarterly reports were submitted as required by Section III.V.49.

W. EU022 – Delayed Coker Unit

Coker Charge Heater (H-7501), Coke Processing Operations

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
W.1, W.13, W.25, W.32, W.33, W.35, W.36	Opacity	20%	Method 9	As Required by the Department and Section III.A.1	Semi-annual
W.2, W.14, W.26, W.32, W.35, W.36	Delayed Coker Unit piping	40 CFR 60, Subpart GGG	40 CFR 60, Subpart GGG	40 CFR 60, Subpart GGG	
W.3, W.15, W.27, W.32, W.35, W.36	Delayed Coker Unit process drains	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	40 CFR 60, Subpart QQQ	
W.4, W.14, W.28, W.32, W.35, W.36	Delayed Coker Unit – Piping in HAP Service	40 CFR 63, Subpart CC	40 CFR 63, Subpart CC	40 CFR 63, Subpart CC	
W.5, W.16, W.29, W.32, W.35, W.36	Coker Charge Heater (H-7501)	Fuel Oil will not be fired in this unit.	Certify	Monthly	
W.6, W.20, W.32, W.34-W.36	SO_2 Emissions from Coker Charge Heater (H-7501)	6.61 tons/rolling 12-calendar month total and 3.02 lb/hr	RFG System H_2S CEMS, see Section B	On-going	Quarterly
W.7, W.17, W.25,W.32 - W.36	NOx Emissions from Coker Charge Heater (H-7501)	28.2 tons/rolling 12-calendar month total and 6.44 lb/hr	Method 7	Annual	
W.8, W.9, W.17, W.18,	CO Emissions from Coker Charge Heater	35.2 tons/rolling 12-calendar month total,	Method 10	Annual	

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Frequency	Reporting Requirements
W.19, W.25, W.32 -W.36	(H-7501)	8.05 lb/hr, and 400 ppm_{vd} at 3% O_2/30-day rolling average. During startup, shutdown, and spalling – 16.1 lb/hr rolling 24-hour average	CEMS	On-going	
W.10, W.21, W.32, W.34, W.35, W.36	VOC Emissions from Coker Charge Heater (H-7501)	1.41 tons/rolling 12-calendar month total	Emission Calculations, see Section B	On-going	
W.11, W.22, W.30, W.32, W.34, W.35, W.36	Coke Processing Operations	Handling Requirements	Certify	Semi-annual	Semi-annual
W.12, W.23, W.24, W.31, W.34-W.36	Coke Drum Steam Vent	The vessel shall not be opened to atmosphere until the pressure is 5.0 psig or lower.	Continuously monitor the pressure in the coke drums	On-going	Quarterly
		VOC emissions 18.10 tons/yr (monthly rolling 12-month average)	Equation, see III.W.23	Annually	
		PM-10 emissions 4.52 tons/yr (monthly rolling 12-month average)	Equation, see III.W.23	Annually	
W.18, W.19, W.32, W.35, W.36	CEMS	Operate & Maintain	40 CFR 60, Appendix F	On-going	Semi-annual
			RATA	Annually	

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.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. These subparts apply to the various pumps, valves, flanges, and other equipment in VOC service within the Delayed Coker fugitive piping and any other equipment constructed or modified after January 4, 1983 (ARM 17.8.340; 40 CFR 60, Subpart GGG and Subpart VV).

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 VV applies to the various pumps, valves, flanges, and other equipment in organic HAP service (ARM 17.8.342; 40 CFR 63, Subpart CC; ARM 17.8.340; and 40 CFR 60, Subpart VV).

W.5. CHS shall not fire fuel oil in the Coker Charge Heater (H-7501) (ARM 17.8.752, ARM 17.8.340, and 40 CFR 60, Subpart J).

W.6. CHS shall not cause or authorize total SO_2 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.7. CHS shall not cause or authorize total NO_x 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.8. 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% O_2 on a 30-day rolling average (ARM 17.8.752).

W.9. 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.10. 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.11. 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 (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 e) 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.10.a-c still apply. The alternate coke handling method is limited to 24 batches per year (ARM 17.8.752).

W.12. CHS will meet the following requirements for the Coke Drum Steam Vent:

a. While operating the delayed coking unit, CHS shall depressurize to 5 lb per square inch gauge (psig) during reactor vessel depressurizing and vent the exhaust gases to the fuel gas recovery system for combustion in a fuel gas combustion device. The vessel shall not be opened to atmosphere until the pressure is 5.0 psig or lower. (ARM 17.8.749).

b. VOC emissions from the Coke Drum Steam Vent shall not exceed 18.10 tons/yr as determined on a monthly rolling 12-month average (ARM 17.8.749).

c. PM-10 emissions from the Coke Drum Steam Vent shall not exceed 4.52 tons/yr as determined on a monthly rolling 12-month average (ARM 17.8.749).

Compliance Demonstration

W.13. 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.14. 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.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 Coker Charge Heater and any other equipment, as appropriate (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

W.16. Compliance with Section III.W.5 shall be accomplished by not firing fuel oil in the Coker Charge Heater (H-7501) (ARM 17.8.1213).

W.17. The Coker Charge Heater (H-7501) shall be tested annually, 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.W.7 and 8 (ARM 17.8.105 and ARM 17.8.749).

W.18. CHS shall operate and maintain the following CEMS/CERMS on the H-7501 stack:

a. O_2 (40 CFR 60, Subpart J)

b. CO (ARM 17.8.1213)

In addition to stack testing required under Section III.W.17, compliance with the CO emission limitations contained in Section III.W.9 shall be determined using data from the CEMS.

W.19. CEMS/CERMS required by this permit shall comply with all applicable provisions of 40 CFR 60.5 though 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.20. CHS shall monitor compliance with the SO_2 limits for the Coker Charge Heater listed in Section III.W.6 through monitoring the volume and H_2S concentration of refinery fuel gas combusted, as specified in Section III.B (ARM 17.8.1213).

W.21. CHS shall monitor compliance with the VOC limit for the Coker Charge Heater listed in Section III.W.9 through maintaining records of the fuel gas consumed and using the emission factor as specified in Section III.B (ARM 17.8.1213).

W.22. Compliance with Section III.W.10 shall be accomplished by following the requirements for the coke processing operations (ARM 17.8.749).

W.23. CHS shall continuously monitor the pressure in the coke drums such that the pressure at which each drum is depressurized can be determined (ARM 17.8.749).

W.24. Using the following equations, CHS shall determine the VOC and PM_{10} 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).

$$PM_{10}, lb/cycle = \left(\frac{15}{2}\Big/\frac{65}{4}\right)\left(-1.5041P^2 + 17.603P + 3.7022\right)$$

$$VOC, lb/cycle = \left(\frac{15}{2}\Big/\frac{65}{4}\right)\left(2.6378P^3 - 33.487P^2 + 144.5P - 37.706\right)$$

P = pressure (psig) at which each coke drum is depressurized.

Record keeping

W.25. All source test record keeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

W.26. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subpart GGG).

W.27. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart QQQ (ARM 17.8.340 and 40 CFR 60, Subpart QQQ).

W.28. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 63, Subpart CC, for any applicable equipment in HAP service (ARM 17.8.342 and 40 CFR 63, Subpart CC).

W.29. CHS shall maintain records that fuel oil was not fired in H-7501 to document compliance with Section III.W.15 (ARM 17.8.1213).

W.30. CHS shall maintain, under CHS's control, records of compliance with the coke processing requirements, to monitor compliance with Section III.W.21 (ARM 17.8.1213).

W.31. CHS shall maintain records of compliance with the coke drum steam vent requirements to document compliance with Section III.W.25 and III.W.26 (ARM 17.8.1213).

W.32. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

W.33. 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.34. CHS shall submit the quarterly emission reports within 30 days of the end of each reporting period. Copies of the emission reports shall be submitted to both the Billings regional office and the Helena office of the Department. 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.6-9;

e. Compliance determinations for hourly, 24-hour and annual limits specifically allowed in Section III.W.6-9 (ARM 17.8.749);

f. Reasons for any emissions in excess of those specifically allowed in Section III.W.6-9 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 and any instances that the drum is not depressurized at below 5 psig (ARM 17.8.749).

W.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).

W.36. The semiannual monitoring report shall provide (ARM 17.8.1212):

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification that records required by Section III.W.28 & W.29 were maintained;

c. Certification that compliance with 40 CFR 60, Subpart GGG was maintained;

d. Certification that compliance with 40 CFR 60, Subpart QQQ was maintained;

e. Certification that compliance with 40 CFR 63, Subpart CC was maintained; and

f. Certification of compliance with unit emission limits and conditions of this section and that quarterly reports were submitted as required by Section III.W.33.

X. EU023 – Zone E SRU/TGTU/TGI

Condition(s)	Pollutant/ Parameter	Permit Limit	Compliance Demonstration Method	Compliance Demonstration Frequency	Reporting Requirements
X.1, X.11, X.23, X.27, X.32, X.33	Zone E SRU/TGTU/TGI	40 CFR 60, Subpart J	40 CFR 60, Subpart J	40 CFR 60, Subpart J	Semi-annual
X.2, X.12, X.13, X.24, X.27, X.32, X.33	Zone E SRU/TGTU/TGI	40 CFR 60, Subpart GGG	40 CFR 60, Subpart VV	40 CFR 60, Subpart VV	
X.3, X.14, X.25, X.27, X.32, X.33	Zone E SRU/TGTU/TGI	40 CFR 63, Subpart UUU	40 CFR 63, Subpart UUU	40 CFR 63, Subpart UUU	
X.4, X.15, X.19, X.20, X.22, X.27, X.28 - X.33	SO_2	49.4 Tons per Rolling 12-Calendar Month Total, and 14.1 lb/hr per Rolling 12-hour	CEMS	On-going	Quarterly
			Method 6/6c	Annually	
X.5, X.6, X.19, X.20, X.22, X.27, X.28 - X.33	SO_2	200 ppm per Rolling 12-month average and 250 ppm per rolling 12-hour corrected to 0% O_2	CEMS	On-going	
X.7, X.16, X.22, X.27, X.28, X.31, X.32, X.33	NO_x	4.62 Tons per Rolling 12-Calendar Month Total, and 1.05 lb/hr	Method 7	Every Five Years	
X.8, X.17, X.26, X.27, X.32, X.33	No fuel oil	Fuel Oil Cannot Be Fired in This Unit	Certify	Ongoing	Semi-annual
X.9, X.18, X.22, X.27, X.28, X.32, X.33	PM	0.10 gr/dscf corrected to 12% CO_2	Method 5	As required by the Department and Section III.A.1	
X.10, X.21, X.22, X.27, X.32, X.33	Opacity	10%	Method 9	As required by the Department and Section III.A.1	
X.19, X.20, X.27, X.29, X.30, X.32, X.33	SO_2, O_2, Flow Rate CEMS/ CERMS	Operate and Maintain	40 CFR 60, Appendix F	Annually	
			RATA	Annually	

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 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 VV applies to the various pumps, valves, flanges, and other equipment in VOC service within the Zone E SRU/TGTU/TGI constructed or modified after January 4, 1983 (ARM 17.8.340; 40 CFR 60, Subpart GGG; and 40 CFR 60, Subpart VV).

X.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, (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.4. SO_2 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.5. SO_2 emissions from the Zone E SRU/TGTU/TGI shall not exceed 250 ppm, rolling 12-hour average corrected to 0% O_2on a dry basis (ARM 17.8.752).

X.6. CHS shall operate and maintain the TGTU on the Coker Unit to limit SO_2 emissions from the Coker Unit stack to no more than 200 ppm on a rolling 12-month average corrected to 0% O_2 on a dry basis (ARM 17.8.752).

X.7. NO_x 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.8. CHS shall not fire fuel oil in this unit (ARM 17.8.749).

X.9. 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% CO_2 (ARM 17.8.752).

X.10. 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.11. 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 (ARM 17.8.340 and 40 CFR 60, Subpart J).

X.12. CHS shall institute a monitoring and maintenance program in accordance with 40 CFR 60, Subpart VV and 40 CFR 60, Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subparts VV and GGG;).

X.13. CHS shall maintain a log, 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 VV).

X.14. 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.15. The Zone E SRU/TGTU/TGI stack shall be tested annually for SO_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_2 emission limits contained in Section III.X.4-6 (ARM 17.8.105 and ARM 17.8.749).

X.16. The Zone E SRU/TGTU/TGI stack shall be tested on a 5-year basis for NO_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_x emission limits contained in Section III.X.7 (ARM 17.8.105 and ARM 17.8.749).

X.17. Compliance with Section III.X.8 shall be accomplished by not firing fuel oil in this unit (ARM 17.8.1213).

X.18. CHS shall monitor compliance with Section III.X.9 by conducting a Method 5 stack test, as required by the Department (ARM 17.8.1213).

X.19. CHS shall operate and maintain the following CEMS/CERMS on the Zone E SRU/TGTU/TGI stack:

a. SO_2 (40 CFR 60, Subpart J, SO_2 SIP)

b. O_2 (40 CFR 60, Subpart J)

c. Volumetric Flow Rate (SO_2 SIP)

In addition to stack testing required under Section III.X.15, compliance with the SO_2, emission limitations contained in Section III.X.4-6 shall be determined using data from the CEMS.

X.20. CEMS/CERMS required by this permit shall comply with all applicable provisions of 40 CFR 60.5 though 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.21. As required by the Department and Section III.A.1, compliance with the opacity limitation listed in Section III.X.10 shall be monitored using EPA reference Method 9 testing by a qualified observer (ARM 17.8.1213).

Record keeping

X.22. All source test record keeping shall be performed in accordance with the test method being used and Section III.A.2 (ARM 17.8.106).

X.23. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart J (ARM 17.8.340 and 40 CFR 60, Subpart J).

X.24. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 60, Subpart GGG (ARM 17.8.340 and 40 CFR 60, Subpart GGG).

X.25. CHS shall conduct all applicable record keeping requirements in accordance with 40 CFR 63, Subpart UUU (ARM 17.8.342 and 40 CFR 63, Subpart UUU).

X.26. CHS shall maintain records that fuel oil was not fired in this unit, to document compliance with Section III.X.17 (ARM 17.8.1213).

X.27. CHS shall maintain, under CHS's control, all records required for compliance monitoring as a permanent business record for at least 5 years. Furthermore, the records must be available at the plant site for inspection by the Department, EPA, and Yellowstone County Air Pollution Control Agency, and must be submitted to the Department upon request (ARM 17.8.1212).

Reporting

X.28. All source test reports shall be submitted to the Department in accordance with Section III.A.2 (ARM 17.8.106).

X.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 SO_2 Emission Control Plan, approved into the SIP by EPA on May 2, 2002 and May 22, 2003).

X.30. 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).

X.31. CHS shall submit the quarterly emission reports within 30 days of the end of each reporting period. Copies of the emission reports shall be submitted to both the Billings regional office and the Helena office of the Department. 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.4-X.7;

e. Compliance determinations for hourly, 24-hour and annual limits specifically allowed in Section III.X.4-X.7 (ARM 17.8.749); and

f. Reasons for any emissions in excess of those specifically allowed in Section III.X.4-X.7 with mitigative measures utilized and corrective actions taken to prevent a recurrence of the situation.

X.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).

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

a. A summary of results of any source testing that was performed during the reporting period;

b. Certification that the records required by Section III.X.26 were maintained;

c. Certification that compliance with 40 CFR 60, Subpart J was maintained;

d. Certification that compliance with 40 CFR 60, Subpart GGG was maintained;

e. Certification that compliance with 40 CFR 63, Subpart UUU was maintained; and

f. Certification of compliance with unit emission limits and conditions of this section and that quarterly reports were submitted as required by Section III.X.31.

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 Resources Management Bureau of the Department of Environmental Quality.

Rule Citation	Reason
ARM 17.8.320, ARM 17.8.321, ARM 17.8.326, ARM 17.8 331, ARM 17.8.332, ARM 17.8.333, ARM 17.8.334 and ARM 17.8.335.	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.
40 CFR 60 Subparts B, C, Ca, Cb 40 CFR 60 Subparts D, Da, Dc 40 CFR 60 Subparts E-I, Ka 40 CFR 60 Subparts L-Z 40 CFR 60 Subparts AA-EE 40 CFR 60 Subparts GG-HH 40 CFR 60 Subparts KK-NN 40 CFR 60 Subparts PP-TT 40 CFR 60 Subparts WW-XX 40 CFR 60 Subparts AAA- DDD 40 CFR 60 Subparts FFF 40 CFR 60 Subparts HHH-LLL 40 CFR 60 Subparts NNN-PPP 40 CFR 60 Subparts RRR-WWW 40 CFR 60 Subparts AAAA--FFFF 40 CFR 60 Subparts HHHH – IIII 40 CFR 60 Subparts KKKK	These requirements are not applicable because the facility is not an affected source as defined in these regulations.
40 CFR 61 Subparts B-F 40 CFR 61 Subparts H-L 40 CFR 61 Subparts N-R 40 CFR 61 Subpart T 40 CFR 61 Subparts W 40 CFR 61 Subpart Y 40 CFR 61 Subpart BB	These requirements are not applicable because the facility is not an affected source as defined in these regulations.
40 CFR 63 Subpart B 40 CFR 63 Subparts F-J 40 CFR 63 Subparts L-O 40 CFR 63 Subparts Q 40 CFR 63 Subpart S-Y 40 CFR 63 Subparts AA-BB 40 CFR 63 Subparts DD-EE 40 CFR 63 Subpart GG - MM 40 CFR 63 Subpart OO-YY 40 CFR 63 Subpart CCC-EEE 40 CFR 63 Subpart GGG-JJJ 40 CFR 63 Subpart LLL-RRR	These requirements are not applicable because the facility is not an affected source as defined in these regulations.

40 CFR 63 Subpart TTT 40 CFR 63 Subpart VVV 40 CFR 63 Subpart XXX 40 CFR 63 Subpart AAAA 40 CFR 63 Subpart CCCC-KKKK 40 CFR 63 Subpart MMMM-YYYY 40 CFR 63 Subpart AAAAA-CCCCC 40 CFR 63 Subpart EEEEE-NNNNN 40 CFR 63 Subpart PPPPP-TTTTT	
40 CFR 82 Subparts A-E 40 CFR 82 Subparts G-H	These requirements are not applicable because the facility is not an affected source as defined in these regulations.
40 CFR 72 through 40 CFR 78	These requirements are not applicable because the facility is not an affected source as defined by the acid rain regulations.

B. 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 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, Record keeping, and Reporting Requirements
ARM 17.8, Subchapter 12, operating Permit Program §1212(2)&(3)

1. Unless otherwise provided in this permit, the permittee shall maintain compliance monitoring records that include the following information:

   a. The date, place as defined in the permit, and time of sampling or measurement;

   b. The date(s) analyses were performed;

   c. The company or entity that performed the analyses;

   d. The analytical techniques or methods used;

   e. The results of such analyses; and

   f. The operating conditions at the time of sampling or measurement.

2. The permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. All monitoring data, support information, and required reports and summaries may be maintained in computerized form at the plant site if the information is made available to Department personnel upon request, which may be for either hard copies or computerized format. Strip-charts must be maintained in their original form at the plant site and shall be made available to Department personnel upon request.

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

E. Prompt Deviation Reporting
ARM 17.8, Subchapter 12, Operating Permit Program §1212(3)(c)

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

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

1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation and causes the source to exceed a technology-based emission limitation under this permit due to the unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of reasonable preventive maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates through properly signed, contemporaneous logs, or other relevant evidence, that:

   a. An emergency occurred and the permittee can identify the cause(s) of the emergency;

   b. The permitted facility was at the time being properly operated;

   c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in the permit; and

   d. The permittee submitted notice of the emergency to the Department within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirements of ARM 17.8.1212(3)(c). 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 record keeping terms or conditions that limit the Department's ability to determine compliance with any applicable rule, consistent with the requirements of the rule; or

   d. Any other change determined by the Department to be significant.

2. Significant modifications shall meet all requirements of ARM Title 17, Chapter 8, including those for applications, public participation, and review by affected states and the administrator, as they apply to permit issuance and renewal, except that an application for a significant permit modification need only address in detail those portions of the permit application that require revision, updating, supplementation or deletion.

3. The permit shield provided for in ARM 17.8.1214 shall extend to significant modifications.

L. Reopening For Cause
ARM 17.8, Subchapter 12, Operating Permit Program §1228(1)&(2)

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

1. Additional applicable requirements under the FCAA become applicable to the facility when the permit has a remaining term of 3 or more years. Reopening and revision of the permit shall be completed not later than 18 months after promulgation of the applicable requirement. No reopening is required under ARM 17.8.1228(1)(a) if the effective date of the applicable requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms or conditions have been extended pursuant to ARM 17.8.1220(12) or 17.8.1221(2);

2. Additional requirements (including excess emission requirements) become applicable to an affected source under the Acid Rain Program. Upon approval by the administrator, excess emission offset plans shall be deemed incorporated into the permit;

3. The Department or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit; or

4. The administrator or the Department determines that the permit must be revised or revoked and reissued to ensure compliance with the applicable requirements.

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

1. This permit is issued for a fixed term of 5 years.

2. Renewal of this permit is subject to the same procedural requirements that apply to permit issuance, including those for application, content, public participation, and affected state and administrator review.

3. Expiration of this permit terminates the permittee's right to operate unless a timely and administratively complete renewal application has been submitted consistent with ARM 17.8.1221 and 17.8.1205(2)(d). If a timely and administratively complete application has been submitted, all terms and conditions of the permit, including the application shield, remain in effect after the permit expires until the permit renewal has been issued or denied.

4. For renewal, the permittee shall submit a complete air quality operating permit application to the Department not later than 6 months prior to the expiration of this permit, unless otherwise specified. If necessary to ensure that the terms of the existing permit will not lapse before renewal, the Department may specify, in writing to the permittee, a longer time period for submission of the renewal application. Such written notification must be provided at least 1 year before the renewal application due date established in the existing permit.

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

1. The administrative appeal or subsequent judicial review of the issuance by the Department of an initial permit under this subchapter shall not impair in any manner the underlying applicability of all applicable requirements, and such requirements continue to apply as if a final permit decision had not been reached by the Department.

2. If any provision of a permit is found to be invalid, all valid parts that are severable from the invalid part remain in effect. If a provision of a permit is invalid in one or more of its applications, the provision remains in effect in all valid applications that are severable from the invalid applications.

O. Transfer or Assignment of Ownership
ARM 17.8, Subchapter 12, Operating Permit Program §1225(2)&(4)

1. If an administrative permit amendment involves a change in ownership or operational control, the applicant must include in its request to the Department a written agreement containing a specific date for the transfer of permit responsibility, coverage and liability between the current and new permittee.

2. The permit shield provided for in ARM17.8.1214 shall not extend to administrative permit amendments.

P. Emissions Trading, Marketable Permits, Economic Incentives
ARM 17.8, Subchapter 12, Operating Permit Program §1226(2)

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

Q. No Property Rights Conveyed
ARM 17.8, Subchapter 12, Operating Permit Program §1210(2)(d)

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

R. Testing Requirements
ARM 17.8, Subchapter 1, General Provisions §105

The permittee shall comply with ARM 17.8.105.

S. Source Testing Protocol
ARM 17.8, Subchapter 1, General Provisions §106

The permittee shall comply with ARM 17.8.106.

T. Malfunctions
ARM 17.8, Subchapter 1, General Provisions §110

The permittee shall comply with ARM 17.8.110.

U. Circumvention
ARM 17.8, Subchapter 1, General Provisions §111

The permittee shall comply with ARM 17.8.111.

V. Motor Vehicles
ARM 17.8, Subchapter 3, Emission Standards §325

The permittee shall comply with ARM 17.8.325.

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

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

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

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

Y. Montana Air Quality Permits
ARM 17.8, Subchapter 7, Permit, Construction and Operation of Air Contaminant Sources §745 and 764 (ARM 17.8.745(1) and 764(1)(b) are STATE ENFORCEABLE ONLY until approval by the EPA as part of the SIP)

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 (STATE ENFORCEABLE ONLY until approved by the EPA as part of the SIP):

   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) (STATE ENFORCEABLE ONLY until approval by the EPA as part of the SIP).

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 record keeping 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 Appendix of this permit, shall have the meaning assigned to them in the referenced regulations.

APPENDICES

Appendix A. INSIGNIFICANT EMISSION UNITS

Disclaimer: The information in this appendix is not State or Federally enforceable, but is presented to assist 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.

Emission Unit ID	Description
IEU01	Electric heater and motors
IEU02	Cooling water service and return
IEU03	Service and storage with < 10% hydrocarbons
IEU04	Steam system
IEU05	Plant air system including but not limited to instrument air piping and air compressors
IEU06	Fresh water system, including but not limited to the river pumping system and boiler feedwater treatment system
IEU07	Crude pipelines supplying the refinery and product pipelines from the refinery
IEU08	Natural gas fired space heaters in buildings
IEU09	Tanks under pressure
IEU10	Any functions performed in shop areas, including but not limited to the machine shop and paint shop
IEU11	Any chemicals contained in spray paint, lubricants, etc.
IEU12	Any nuclear density gauges and measurement devices
IEU13	Any diesel-driven equipment such as pumps
IEU14	Laboratory activities
IEU15	Air preheater during FCC startups
IEU16	10 kW generator
IEU17	75 kW emergency generator

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.

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

"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(e) of the FCAA, any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established in 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:

ARM	Administrative Rules of Montana
ASTM	American Society of Testing Materials
BACT	Best Available Control Technology
BDT	bone dry tons
BTU	British Thermal Unit
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic foot
dscfm	dry standard cubic foot per minute
EEAP	Emergency Episode Action Plan
EPA	U.S. Environmental Protection Agency
EPA Method	Test methods contained in 40 CFR 60, Appendix A
EU	emissions unit
FCAA	Federal Clean Air Act
gr	grains
HAP	hazardous air pollutant
IEU	insignificant emissions unit
Mbdft	thousand board feet
Method 5	40 CFR 60, Appendix A, Method 5
Method 9	40 CFR 60, Appendix A, Method 9
MMbdft	million board feet
MMBTU	million British Thermal Units
NOx	oxides of nitrogen
NO2	nitrogen dioxide
O2	oxygen
Pb	lead
PM	particulate matter
PM10	particulate matter less than 10 microns in size
psi	pounds per square inch
scf	standard cubic feet
SIC	Source Industrial Classification
SO2	sulfur dioxide
SOx	oxides of sulfur
TPY	tons per year
U.S.C.	United States Code
VE	visible emissions
VOC	volatile organic compound

Appendix C. NOTIFICATION ADDRESSES

Compliance Notifications:

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

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

Permit Modifications:

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

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

Appendix D. AIR QUALITY INSPECTOR INFORMATION

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

Direction to Plant: 802 South Highway 212, Laurel, Montana, 59044

Safety Equipment Required: CHS has an extensive safety orientation package that inspectors and/or visitors must participate in.

In order to access areas of the refinery (in addition to the Administration Building and the offices on the second floor of the Engineers Building), inspectors/visitors must view a refinery hazard awareness training video and either provide their own, or be issued, any required personal protective equipment (PPE). As a minimum, a hard-hat and safety glasses are required. In addition, they must either be accompanied by the refinery contact person or follow an approved, designated route and only visit approved locations. Visitors are also required to sign in and out and obtain passes based on necessary access.

Facility Plot Plan: An updated facility plot plan was submitted on October 18, 2005.

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

OR

CHS, Inc. – Laurel Refinery
802 South Highway 212
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/

Appendix F. Summary of Terms and Conditions from the Consent Decree

The following is a summary of terms and conditions from the Consent Decree (United States et al v. CHS Inc., Civil Action CV-03-153-BLG-RFC (D. Mont. February 23, 2004). Although they are not terms and conditions of this Operating Permit, these terms and conditions may be enforced by the State of Montana and the United States Environmental Protection Agency pursuant to the provisions of the Consent Decree. These requirements are effective until Consent Decree termination and are summarized below. NOTE: Terms and conditions of the Consent Decree that have already been completed by CHS or are specifically included in the Title V Operating Permit are not listed in this Appendix.

NSPS Applicability of and Compliance for Sulfur Recovery Plant

Preventative Maintenance and Operations Plan (Paragraphs 68 – 70)
CHS shall maintain a Preventative Maintenance and Operations Plan for the Zone A and Zone D Sulfur Recovery Plants, each Tail Gas Treatment Unit and the appropriate Upstream Process Units. The plan shall be a compilation of CHS' approaches for exercising good air pollution control practices for minimizing SO_2 emissions at the Laurel Refinery. The plan shall include all components discussed in paragraph 69 of the Consent Decree. Modifications relating to minimizing Acid Gas Flaring and/or SO_2 emissions made by CHS to the plan shall be summarized in an annual submission to EPA and the Montana DEQ. Note: See 12/20/2011 CHS letter and Revision 7 (dated 12/06/2011) for the PMOP for SRUs (sulfur recovery units) and TGTUs (Tail Gas Treating Units)

Control of Acid Gas Flaring Incidents and Tail Gas Incidents

CHS shall implement procedures for evaluating whether future Acid Gas Flaring Incidents and Tail Gas Incidents are due to Malfunctions. The procedures shall require a root cause failure analysis and corrective action for all types of Acid Gas Flaring and Tail Gas Incidents and require stipulated penalties for Acid Gas Flaring and Tail Gas Incidents if the root causes were not due to Malfunctions.

Acid Gas Flaring Incidents Investigation and Reporting (Paragraph 79)
No later than (45) days following the end of an Acid Gas Flaring Incident, CHS shall submit a report that sets forth the information listed in paragraph 79 of the Consent Decree.

Corrective Action (Paragraphs 80 – 83)
In response to any Acid Gas Flaring Incident, CHS shall take, as expeditiously as practicable, such interim and/or long-term corrective actions, if any, as are consistent with good engineering practice to minimize the likelihood of a recurrence of the Root Cause and all contributing causes of the Acid Gas Flaring Incident.

If EPA and/or Montana DEQ do not notify CHS in writing within 45 days of receipt of the report(s) required by paragraph 79 that they object to one or more aspects of the proposed corrective action(s), if any, and schedule(s) of implementation, if any, then that (those) action(s) and schedule(s) shall be deemed acceptable for purposes of compliance with paragraph 80.

EPA and Montana DEQ do not, however, by their consent to the entry of the Consent Decree or by their failure to object to any corrective action that CHS may take in the future, warrant or aver in any manner that any corrective actions in the future shall result in compliance with the provisions of the Clean Air Act, Montana Clean Air Act or their implementing regulations. Notwithstanding EPA's review of any plans, reports, corrective measures or procedures under Subsection J of this decree, CHS shall remain solely responsible for non-compliance with the federal Clean Air Act, Montana Clean Air Act or their implementing regulations. Nothing in Subsection J of the decree shall be construed as a waiver of EPA's right under the Clean Air Act and its regulations for future violations of the Act or its regulations.

If the EPA does object, in whole or in part, to the proposed corrective action(s) and/or the schedule(s) of implementation, or, where applicable, to the absence of such proposal(s) and/or schedule(s), it shall notify CHS of that fact within thirty (30) days following receipt of the report(s) required by Paragraph 79 above.

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

Tail Gas Incidents – Investigation, Reporting, Corrective Action and Stipulated Penalties. (Paragraph 92)
For future Tail Gas Incidents, CHS shall follow the same investigative, reporting, corrective action and assessment of stipulated penalty procedures as those outlined for Acid Gas Flaring Incidents. Those procedures shall be applied to TGTU shutdowns, bypasses of a TGTU, unscheduled shutdowns of a Sulfur Recovery Plant, or other miscellaneous unscheduled Sulfur Recovery Plant events which results in a Tail Gas Incident.

Control of Hydrocarbon Flaring Incidents

For future Hydrocarbon Flaring Events, CHS shall follow the same investigative and corrective action procedures as those outlined for Acid Gas Flaring Incidents; provided, however, that, in lieu of analyzing possible corrective actions under Paragraph 79(e) and taking interim and/or long term corrective action under Paragraph 80 for a Hydrocarbon Flaring Incident attributable to the start up or shut down of a unit that CHS has previously analyzed under Subsection K – Control of Hydrocarbon Flaring Incidents, CHS may identify such prior analysis when submitting the required report. CHS shall follow the same reporting procedures as those outlined for Acid Gas Flaring Incidents, except that CHS shall only be required to submit such information to EPA and Montana DEQ in the Quarterly Reports required under Paragraph 193. Stipulated penalties shall not apply to Hydrocarbon Flaring Events.

Benzene Waste Operations NESHAP Program Enhancements

Refinery Compliance Status Changes (Paragraphs 96-97)
CHS has reported that the Laurel Refinery has a Total Annual Benzene (TAB) of less than 10 Mg/yr, in accordance with 40 CFR 61, Subpart FF. If at any time before termination of the Consent Decree, the refinery is determined to have a TAB equal to or greater than 10 Mg/yr, CHS shall comply with the compliance option set forth at 40 CFR 61.342(e), the "6 BQ compliance option".

Annual Program (Paragraph 104)
CHS shall establish, maintain, and conduct an annual program for reviewing process information for the Laurel Refinery, including but not limited to construction projects, to ensure that all new benzene waste streams are included in the Laurel Refinery's waste stream inventory and TAB.

Benzene Spills (Paragraph 105)
For each spill at the Laurel Refinery, CHS shall review such spills to determine if benzene waste was generated. CHS shall include benzene generated by such spills in the TAB for the Laurel Refinery.

Training (Paragraphs 106-108)
CHS shall conduct annual (i.e.: once each calendar year) training for all employees asked to draw benzene waste samples. If the Laurel Refinery's TAB reaches 10 Mg/yr or more, CHS shall develop and maintain standard operating procedures for all control equipment used to comply with the Benzene Waste Operations NESHAP. CHS shall complete an initial training program regarding these procedures for all operators assigned to this equipment. Comparable training shall be provided to any persons who subsequently become operators, prior to their assumption of this duty. "Refresher" training shall be performed on a periodic basis. CHS shall propose a schedule for the initial and refresher training at the

same time that CHS proposes a plan, pursuant to either Paragraph 101 or Paragraph 128, that identifies the compliance strategy and schedule that CHS shall implement to come into compliance with the 6 BQ compliance option. As part of CHS' training program, it must ensure that the employees of any contractors hired to perform the requirements of Subsection L – Benzene Waste Operations NESHAP Program Enhancement are properly trained to implement all provisions of the Subsection at the Laurel Refinery.

Periodic Sampling (Paragraphs 113 – 119)
Annual Sampling: For this refinery, which has a TAB of less than 10 Mg/yr, CHS shall, once per calendar year, conduct sampling, consistent with the requirements of 40 CFR 61.355(c)(1) and (3), of all waste streams containing benzene that contributed 0.05 Mg/yr or more to the TAB set forth in the previous year's TAB.

Quarterly Sampling: On a quarterly basis, CHS shall conduct an End Of Line (EOL) determination of benzene quantity in accordance with the EPA approved sampling plan.

Quarterly Estimations of Annual TAB: CHS shall calculate a quarterly EOL benzene quantity and a projected calendar year TAB as set forth in paragraphs 117 and 118 of the Consent Decree. As applicable, CHS shall prepare a written summary and schedule of activities planned to minimize benzene wastes to ensure that the calendar year calculation complies with the Benzene Waste Operations NESHAP compliance option, as set forth in paragraph 118 of the Consent Decree.

Recordkeeping and Reporting Requirements (Paragraph 131)
In addition to the reports required under 40 CFR 61.537 and the Quarterly Progress Report Procedures of Part X of the Consent Decree (Recordkeeping and Reporting), at the times specified in the applicable provisions and Part V of the Consent Decree, CHS shall submit, and as to the extent required, the reports set forth in Paragraph 131 of the Consent Decree to the Applicable Federal and State Agencies.

Laboratory Audits (Paragraphs 136 – 138)
CHS shall conduct audits of all laboratories that perform analyses of CHS' benzene waste operations NESHAP samples to ensure that proper analytical and quality assurance/quality control procedures are followed. These audits may be conducted by either CHS personnel or third parties. CHS may retain third parties to conduct these audits or use audits conducted by others as its own. CHS shall audit any new laboratory used for analyses of benzene samples prior to use of the new laboratory. During the life of the Consent Decree, CHS shall conduct subsequent laboratory audits, such that each laboratory is audited every two years.

Leak Detection and Repair ("LDAR") Program Enhancements

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

Valves Not Included in the Monitoring Program as of 9/30/03 (Paragraph 140.a.)
CHS shall monitor valves in light-liquid and/or gaseous service which were not included in the existing refinery LDAR program at least annually, shall repair leaks identified under this subparagraph in accordance with the requirements for other, regulated valves, and shall maintain all records for valves monitored and repaired under this subparagraph in accordance with the requirements for other, regulated valves.

Written Refinery-Wide LDAR Program (Paragraph 141)
CHS shall maintain a written refinery-wide program for compliance with all applicable federal LDAR regulations. CHS shall implement the program on a refinery-wide basis and update the program as necessary to ensure continuing compliance. The refinery-wide program shall include the items listed in Paragraph 141 of the Consent Decree.

Training (Paragraph 142)
CHS shall maintain the training program described in Paragraph 142 of the Consent Decree.

LDAR Audits (Paragraphs 143-148)
CHS shall complete refinery-wide LDAR audits as set forth in Paragraphs 144-146 of the Consent Decree to ensure the refinery's compliance with all applicable LDAR requirements. The audits shall include but not be limited to, comparative monitoring, records review to ensure monitoring and repairs were completed in the required periods, component identification procedures, tagging procedures, data management procedures and observation of the LDAR technicians' calibration and monitoring techniques. During the LDAR audits, leak rates shall be calculated for each process unit where comparative monitoring was performed. An audit of the refinery shall occur every two (2) years and, if CHS led audits are done, third-party and the CHS led audits shall be separated by two years.

Actions Necessary to Correct Non-Compliance (Paragraph 149)
If the results of any of the audits identify any areas of non-compliance, CHS shall implement, as soon as practicable, all steps necessary to correct the area(s) of non-compliance, and to prevent, to the extent practicable, a recurrence of the cause of the non-compliance. Until two (2) years after the termination of the Consent Decree, CHS shall retain the audit reports generated pursuant to Paragraphs 144-146 of the Consent Decree and shall maintain a written record of the corrective actions that the permittee takes in response to any deficiencies identified in any audits. In the quarterly report submitted pursuant to the provisions of Part X of the Consent Decree (Recordkeeping and Reporting) for the first calendar quarter of each year, CHS shall submit the audit reports and corrective action records for audits performed and actions taken during the previous year.

Internal Leak Definition for Valves and Pumps (Paragraphs 150 – 152)
The permittee shall utilize the following internal leak definitions, unless other permit(s), regulations, or laws require the use of lower leak definitions.

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

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

Reporting, Recording, Tracking, Repairing and Re-monitoring Leaks of Valves and Pumps Based on the Internal Leak Definitions (Paragraphs 153-155)
Reporting: For regulatory reporting purposes, CHS may continue to report leak rates in valves and pumps against the applicable regulatory leak definition, or may use the lower, internal leak definitions specified in paragraphs 151 and 152. The permittee will identify in the report which definition is being used.

Recording, Tracking, Repairing and Re-monitoring Leaks: CHS shall record, track, repair and re-monitor all leaks in excess of the internal leak definitions of Paragraphs 151 and 152, except that CHS shall have five days to make an initial attempt to repair and re-monitor the component, and have 30 days to make repairs and re-monitor leaks that are greater than the internal leak definitions but less than the applicable regulatory leak definitions, or to place the component on the delay of repair list.

First Attempt at Repairs on Valves (Paragraph 155)
CHS shall make a "first attempt at repair" on any valve that has a reading greater than 200 ppm of VOCs, excluding valves that LDAR personnel are not authorized to repair. CHS, or its designated contractor, however, shall re-monitor within five business days, all valves that LDAR personnel attempted to repair. If the data from the re-monitoring shows that the leak is greater than 500 ppm, CHS must repair the valve. Unless the re-monitoring rate is greater than the applicable leak definition, no further action will be necessary.

LDAR Monitoring Frequency (Paragraph 156-157)
Pumps: CHS shall monitor pumps in light liquid and gas/vapor service at the lower leak definition on a monthly basis.

Valves: Unless more frequent monitoring is required by state or federal regulation, CHS shall monitor valves in light liquid and/or gas vapor service – other than difficult to monitor or unsafe to monitor valves – on a quarterly basis, with no ability to skip periods on a process-unit-by-process-unit basis.

Electronic Monitoring, Storing, and Reporting of LDAR Data (Paragraphs 158 – 159)
Electronic Storing and Reporting of LDAR Data: CHS shall maintain an electronic database for storing and reporting LDAR data.

Electronic Data Collection During LDAR Monitoring: CHS shall use dataloggers and/or electronic data collection devices during LDAR monitoring. CHS, or its designated contractor, shall use its/their best efforts to transfer, on a daily basis, electronic data from electronic datalogging devices to the electronic database of Paragraph 158. For all monitoring events in which an electronic data collection device is used, the collected monitoring data shall include a time and date stamp, and instrument and operator identification. CHS may use paper logs where necessary or more feasible (e.g., small rounds, re-monitoring, or when dataloggers are not available or broken), and shall record, at a minimum, the identification of the technician undertaking the monitoring, the date, the daily start and end time for monitoring, and the identification of the monitoring equipment. CHS shall transfer any manually recorded monitoring data to the electronic database of Paragraph 158 within seven (7) days of monitoring.

QA/QC of LDAR Data (Paragraph 160)
CHS, or a third party contractor retained by CHS, shall implement a procedure to ensure a quality assurance/quality control ("QA/QC") review of all data generated by LDAR monitoring technicians. This QA/QC procedure shall include the procedures as set forth in paragraph 160 of the Consent Decree.

LDAR Personnel (Paragraph 161)
CHS shall establish a program that will hold LDAR personnel accountable for LDAR performance. CHS shall maintain a position within the Laurel Refinery responsible for LDAR management, with the authority to implement improvements.

Adding New Valves and Pumps (Paragraph 162)
CHS shall establish a tracking program for maintenance records (e.g.; a Management of Change program) to ensure that valves and pumps added to the Laurel Refinery during maintenance and construction are integrated into the Basic LDAR Program.

Calibration/Calibration Drift Assessment (Paragraphs 163-164)
Calibration: CHS shall conduct all calibrations of LDAR monitoring equipment using methane as the calibration gas, in accordance with 40 CFR Part 60, EPA Reference Test Method 21.

Calibration Drift Assessment: CHS shall conduct calibration drift assessments of LDAR monitoring equipment at the end of each monitoring shift, at a minimum. CHS shall conduct the calibration drift

assessment using, at a minimum, a 500 ppm calibration gas. If any calibration drift assessment after the initial calibration shows a negative drift of more than 10% from the previous calibration, CHS shall re-monitor all valves that were monitored since the last calibration that had a reading greater than 100 ppm and shall re-monitor all pumps that were monitored since the last calibration that had a reading greater than 500 ppm.

Delay of Repair (Paragraph 165)
For any equipment for which CHS is allowed, under 40 CFR 60.482-9(a), to place on the "delay of repair" list for repair, CHS shall:

For all equipment:
Require sign-off by the unit supervisor that the piece of equipment is technically infeasible to repair without a process unit shutdown, before the component is eligible for inclusion on the "delay of repair" list; and include equipment that is placed on the "delay of repair" list in CHS' regular LDAR monitoring. For leaks above the internal leak definition rate and below the regulatory rate, CHS shall have 30 days after identifying the leak to put the equipment on the delay of repair list.

For valves:
For valves, other than control valves, leaking at a rate of 10,000 ppm or greater and which cannot be repaired using traditional techniques, CHS shall use the "drill and tap" or equivalent repair method for fixing such leaking valves, rather than placing the valve on the "delay of repair" list, unless CHS can demonstrate that there is a safety, mechanical, or major environmental concern posed by repairing the leak in that manner. CHS shall make the first attempt using the "drill and tap" or equivalent repair method within 15 days of identification of the leak, and shall have 45 days from when the leak was identified to complete the repair attempts.

For valves, other than control valves or pressure relief valves, leaking at a rate of 50,000 ppm or greater, CHS shall use the "drill and tap" or equivalent repair method for fixing such leaking valves, rather than placing the valve on the "delay of repair" list, unless CHS can demonstrate that there is a safety, mechanical, or major environmental concern posed by repairing the leak in that manner. CHS shall make the first attempt using the "drill and tap" or equivalent repair method within 15 days of identification of the leak, and shall have 21 days from when the leak was identified to complete the repair attempts.

After two unsuccessful attempts to repair a leaking valve through the "drill and tap" or equivalent repair method, CHS may place the leaking valve on its "delay of repair" list. CHS shall advise EPA prior to implementing repair methods equivalent to "drill and tap" if such method develops for repairing valves.

Recordkeeping and Reporting Requirements (Paragraphs 166-170)
Quarterly Progress Report for the First Calendar Quarter of Each Year: CHS shall include an identification of each audit that was conducted pursuant to the requirements of Paragraphs 143-148 in the previous calendar year including an identification of the auditors, a summary of the audit results, and a summary of the actions that CHS took or intends to take to correct all deficiencies identified in the audits.

Reports due under 40 CFR 63.654: In each report due under 40 CFR 63.654, CHS shall include the information included in Paragraph 169 of the Consent Decree.

Agencies to Receive Reports, Plans and Certifications Required in Subsection M – Leak Detection and Repair Program Enhancements; Number of Copies (Paragraph 171)
CHS shall submit to the Applicable Federal and State Agencies all reports, plans and certifications required to be submitted under this subsection.