

City of Great Falls
Industrial Pretreatment Program
Industrial Wastewater Discharge Permit Renewal Rationale
Calumet Montana Refining, LLC
Permit No. 01-22
December 2021

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AUTHORITY & PURPOSE:

The City of Great Falls' (City) Montana Pollutant Discharge Elimination System (MPDES) permit requires the City to establish and operate an Industrial Pretreatment Program (IPP) to regulate indirect dischargers to the Publicly Owned Treatment Works (POTW). The City's IPP was approved under the Federal Clean Water Act (CWA) by the United States Environmental Protection Agency (EPA) on December 23, 1985, establishing the City as the Control Authority. Title 13 Chapter 12 of the Official Code of the City of Great Falls (OCCGF) establishes policy, procedures and requirements applicable to indirect dischargers to the City's POTW in order to protect City infrastructure and ensure compliance with federal and state requirements under the Federal Clean Water Act, the Montana Water Quality Act, the City's MPDES discharge permit, and the general federal pretreatment regulation at Title 40 Code of Federal Regulations (CFR), Part 403. The Industrial Wastewater Discharge Permit does not authorize direct discharge to state waters.

Section (§) 13.12.050.G (OCCGF) establishes that the City will issue Industrial Wastewater Discharge Permits to Industrial Users for a period not to exceed 5 years. Section 13.12.050 OCCGF further defines that an existing discharger proposing to continue to discharge after expiration of its permit must provide a renewal permit application for City consideration and action. Finally, Section 13.12.050.J OCCGF provides that the City may modify an Industrial Wastewater Discharge Permit for good cause. Cause includes updating permits to address significant alterations to the industrial user's operation, process, or wastewater volume or character. This Permit Rationale provides the City's statement of fact and conclusions of law for its decision to issue the Calumet Montana Refining, LLC (CMR) Industrial Wastewater Discharge Permit Renewal.

BACKGROUND:

Permit History and Application Information

Montana Refining was originally permitted to discharge to the City's sewer system after the City's IPP was approved. In 2013, ownership changed from Montana Refining to Calumet Montana Refining, LLC. The current permit became effective on December 24, 2013 (permit #13-01) and has been modified as follows:

- A Permit Modification became effective on May 19, 2015, pursuant to the Consent Decree negotiated with USEPA. Portions of this Permit Modification were appealed by CMR, but the appeal was later withdrawn.
- A Permit Modification became effective on February 1, 2016, following CMR's submittal of Wastewater Treatment Expansion for the Low Sulfur Fuel Expansion Project.
- A Permit Modification became effective on January 1, 2017, updating copper and selenium allocations and updating the permit number for administrative purposes. The Permit Modification (now permit #01-17) expiration date remained December 23, 2018.

On September 20, 2018, CMR submitted a Renewal for Permit #01-17 to the City of Great Falls Public Environmental Division (COGF ENV). On December 21, 2018, the COGF ENV provided CMR notice of application completeness and administratively extended Permit #01-17 on December 23, 2018.

CMR submitted an amendment to the permit renewal application on November 12, 2019. On November 26, 2019, the COGF ENV requested additional information. On August 24, 2021, CMR submitted an addendum to the November 12, 2019, amendment to renewal application. The August 24, 2021, addendum included:

- **RDU-** intent to modify refining process to add a Renewable Diesel Unit (RDU) in 2Q 2022. The RDU would produce an annual average of 15,000 barrels per day of pre-treated renewable fuels feedstock. The RDU production would replace 15,000 barrels per day of petroleum-crude processing.
 - Introduction of the RDU introduced a secondary SIC code 2869 (Industrial Organic Chemicals, Not Elsewhere Classified) to reflect the RDU biomass feedstock operations to produce renewable fuels.
 - Due to CMR's application statement, "significant changes in effluent quality and quantity are not anticipated with the proposed RDU", COGF ENV finds no issue with process modification of replacing existing crude oil refining with RDU.
- **Blue/Yellow DAF-** request to remove existing Blue/Yellow (B/Y) dissolved air flotation (DAF) units. Request noted that the 2015/2016 pretreatment expansion included new chemical mix tank and new DAF treatment system upstream of TK-146 Aeration Tank. CMR performed study and concluded existing B/Y DAF provides minimal constituent removal.
 - COGF ENV finds the B/Y DAF is not required for effective pretreatment system. B/Y DAF may be removed from service.
- **pH adjustment of maximum pH limit-** request to increase pH maximum limit from existing 7.6 s.u. to 9.0 s.u. to increase operability with fewer block-ins of the discharge.
 - COGF ENV finds pH range of 5.5 s.u. to 9.0 s.u. will not adversely affect the POTW.
- **Grab sample pH monitoring at MP001-** request to remove monitoring requirement of grab sample for pH every three (3) hours at MP001. Request noted that continuous pH monitoring is performed in same pipeline
 - COGF ENV finds that a weekly grab sample for pH at MP 001 is adequate. Monitoring requirements have been updated in Table 3.

CMR requested a meeting with the COGF ENV, held September 1, 2021, where CMR presented an overview of proposed RDU. On September 24, 2021, the City requested that CMR submit clarifying and additional information. The additional information and clarifications were submitted to COGF ENV on September 28, 2021.

On October 4, 2021, COGF ENV declared the Industrial Wastewater Discharge Permit application submitted by CMR to be complete pursuant to §13.12.050.G.3 OCCGF. CMR submitted additional technical justification on December 2, 2021.

Facility Description

CMR refines crude oil into conventional and premium motor gasoline, jet fuels, kerosene, ultra low sulfur diesel (ULSD), and asphalt. CMR is proposing the addition of a Renewable Diesel Unit (RDU) which will refine renewable feedstock into renewable-naphtha and renewable-diesel. The facility is located at 1900 10th St Northeast, Great Falls Montana, located in the NW ¼ of the NE ¼ of Section 1, Township 20 North Range 3 East, Cascade County Montana. The facility is located adjacent to the Missouri River near the City's wastewater treatment plant (WWTP). Process wastewater and site stormwater is treated by a pretreatment system prior to discharge to the sewer at City manhole #4070. CMR is the last discharger on a 36-inch line from MaltEurop. This 36-inch line also conveys wastewater from Black Eagle at a manhole approximately 0.5 miles east of the CMR outfall. Based on the existing discharge location and available

collection system capacity the City finds, pursuant to §13.12.050.G.3 OCCGF, that the proposed operation and discharge of the applicant would permit the normal and efficient operation of the POTW.

CMR's current refining operations are classified under SIC Code 2911 Petroleum Refining. (North American Industry Classification System (NAICS) for Petroleum Refineries is 324110.) Under SIC Code 2911, process wastewater is subject to categorical effluent limitation guidelines further discussed in the Specific Discharge Limitations section of this document. The proposed RDU refining operations are classified under SIC Code 2869 Industrial Organic Chemicals, Not Elsewhere Classified due to use of biomass feedstock.

Process Description

See Attachment 1 – Block Flow Diagram for process flow diagram of crude refining and RDU refining processes. The first step of the crude oil refining process is to use a furnace to heat the crude oil in a tower to the vaporization point. The vapor and any remaining liquids are then separated based on boiling point. Gasoline has the lowest boiling point and rises to the top of the tower, followed by jet fuel and kerosene, then diesel fuels, followed by industrial fuel oil and finally asphalt. Once separated, the various components go through the conversion process. This process uses chemicals, catalysts, pressure, and heat to break the larger components down into smaller, more useful molecules. Desulfurizers are used remove unwanted sulphur. Once converted, the molecules go through a blending process to create the desired final products, such as gasoline.

The existing mild hydrocracker (MHC) will be modified to create the proposed RDU. The modifications will allow for processing of pre-treated renewable feedstocks, such a pre-treated technical tallow. An expansion of paved areas in support of the RDU is necessary. The RDU will add two product offerings: renewable diesel and renewable naphtha, but the Facility's capacity will remain 30,000 bpd throughput.

Stripped Sour Water

Currently, CMR returns stripped sour water (SSW) from the MHC to the desalter for wash water make-up. The proposed RDU is projected to produce approximately 50 gpm of sour water. The RDU sour water will be sent to the existing sour water stripper and then to the crude unit desalter as wash water make-up. SSW from the petroleum MHC process has a significantly higher load of sulphur content than SSW from the RDU process. Any excess SSW from the RDU will be sent through the process sewer to the CMR wastewater pretreatment system. CMR does not anticipate a change from current operations in the volume and quality of SSW sent to the pretreatment system.

Pretreatment Process

CMR's Pretreatment process flow diagram and site plan are included in Attachment 2. All process wastewater and site stormwater are directed to an American Petroleum Institute (API) oil-water separator. Skimmed oil from the API oil-water is directed to recovered oil truck loading or stored in TK 144A and TK 144B. API effluent is pumped to TK 145 or TK 143 where additional skimmed oil is separated and pumped to recovered oil truck loading. From TK 145 or TK 143, effluent is pumped to the Mix TK which includes options for chemical injection from the chemical building. Effluent from the Mix TK gravity flows to Dissolved Air Flotation (DAF) where additional suspended materials are removed and stored in TK 186. DAF effluent gravity flows to the Caustic Mix TK. Effluent from the Caustic Mix TK gravity flows to TK 146. The existing B/Y DAF will be removed, and effluent from TK 146 will be pumped to the monitoring points upstream of discharge to the outfall at City manhole #4070. CMR currently uses the following chemicals in the pretreatment process: Sulfuric Acid, Hydrogen Peroxide, Klaraid IC1187, and Klaraid CDMP1336 Coagulant.

Non-Discharged Wastes

Skimmed oil throughout the Pretreatment process, including from the API oil-water separator and from TK 145 and TK 143, is collected as recovered oil.

Solids from API oil-water separator and DAF are disposed off-site through contract disposal. Solids DAF Float/Solids are produced at a rate of 2,000 lbs/yr, with the exception of 2021 when they were produced at a rate of 7,700 lbs/yr due to cleaning efforts. API Solids are disposed of as needed.

Stormwater

CMR collects on-site stormwater which has potential to come in contact with any raw material, intermediate product, finished product, by-product, or waste product located on the petroleum refinery property. 40 CFR, Part 419.11 defines this stormwater as “contaminated runoff”. Contaminated runoff is diverted to the pretreatment system due. In addition to the existing paved surfaces, approximately 1.4 acres of currently unpaved land will be paved as part of the RDU improvements. Additional paved surface will not significantly increase stormwater.

Outfalls and Monitoring Point(s)

- **Outfall 001** is located on the southern boundary of the refinery property and discharges to City manhole #4070.

Final Monitoring Point(s)

Monitoring Points 001 and 002 capture the industrial wastewater per Section 13.12.020 OCCGF. Both Monitoring Points are located directly before the flowmeter on the line that discharges to City manhole #4070.

- **Monitoring Point 001 (MP001)** MP001 is located directly before the flow meter on the line that discharges to City manhole #4070. This 1-inch connection has a ball valve installed for collection of grab samples.
- **Monitoring Point 002 (MP002)** MP002 is located directly before the flow meter on the line that discharges to City manhole #4070. This 1-inch line is connected to a composite sampler.

Existing Effluent Characteristics

Under Permit #01-17, CMR is authorized to discharge 720,000 gpd of process wastewater and stormwater which have been treated by the pretreatment system.

Data from discharge monitoring reports (DMR) from 2020 and 2021 are summarized in Table 1. Concentrations in table below are representative of average concentrations of 2020 and 2021 effluent samples, with the exception of arsenic which includes monthly effluent samples since November 2017. Samples listed with a “<” represent when all samples were non-detect and the method detection limit is listed. Table 1 results for self monitoring parameters were compared to DMR data and results were consistent.

Table 1: Pretreatment Effluent Wastewater Quantity		
Parameter	Units	Sample Result
Biochemical Oxygen Demand, (BOD ₅) ¹	mg/L	100
Chemical Oxygen Demand (COD) ¹	mg/L	22
Oil and Grease ^{1,2}	mg/L	11
Total Suspended Solids (TSS) ¹	mg/L	63
Total Dissolved Solids (TSD) ³	mg/L	1,194
Arsenic, Total ⁴	mg/L	0.069

Table 1: Pretreatment Effluent Wastewater Quantity		
Parameter	Units	Sample Result
Cadmium, Total ⁴	mg/L	< 0.001
Chromium, Total ⁴	mg/L	< 0.005
Hexavalent Chromium ⁴	mg/L	< 0.010
Trivalent Chromium ⁴	mg/L	< 0.010
Copper, Total ⁴	mg/L	0.005
Lead, Total ⁴	mg/L	0.002
Mercury, Total ⁴	mg/L	<0.0001 (mg/L)
Nickel, Total ⁴	mg/L	0.005
Selenium, Total ⁴	mg/L	0.024
Silver, Total ⁴	mg/l	< 0.001
Zinc, Total ⁴	mg/L	0.078
Nitrogen, Kjeldahl, Total as N ¹	mg/L	6.7
Phosphorus, Total ³	mg/L	0.1
Turbidity ³	NTU	84
Sulfide ¹	mg/L	2.0
Ammonia ¹	mg/L as N	0.9
Chloride ³	mg/L	444
Hardness ³	mg/L as CaCO ₃	254
Alkalinity ³	mg/L as CaCO ₃	150
Bicarbonate ³	mg/L as HCO ₃	182
Carbonate ³	mg/L as CO ₃	< 4.0
Calcium ³	mg/L	68
Magnesium ³	mg/L	20
Phenolics, Total Recoverable ³	mg/L	0.2
Barium ⁴	mg/L	0.248
Cyanide, Total ⁵	mg/L	< 0.003
Bis (2-ethylhexyl) phthalate ⁵	mg/L	< 0.002
¹ Includes DMR data and data from B/Y DAF. ² Oil and Grease, Sulfur Corrected ³ Data collected from B/Y DAF ⁴ DMR data from January 2020 through July 2021. Where DMR data is collected monthly, April 2020 is excluded from reported average due to unusual site conditions. ⁵ Single sample collected December 2019		

Compliance History

Since the most recent permit modification (effective 1/1/2017), thirteen (13) compliance violations have occurred. Compliance violations have resulted in eight (8) Level 1 warnings, and five (5) Level 2 Notice of Violations. Compliance violations from 1/1/2017 to 10/31/2021 are listed below.

- 4/30/2018- **Level 1 Warning** issued for H₂S on 4/29/2018-CMR Senior Environmental Compliance Coordinator notified the City within 24 hours of a flowmeter failure and repair completed on CMR effluent flowmeter on 4/29/2018.
- 6/8/2018- **Level 2 NOV** issued for failure to sample for ammonia and for sulfide concentrations for the month of May 2018.

- 10/29/2018- **Level 1 Warning** issued for cover letter date.
- 1/2/2019- **Level 1 Warning** issued for Chain of Custody (COC) and container labeling on 11/5-6/2018.
- 12/21/2018- **Level 1 Warning** issued for COC date on 3/15/17
- 1/2/2019 (dated 12/28/2018)- **Level 2 NOV** issued for improper sampling analysis methods on May 22, 2017 (methods not approved under CFR 136) and listing of incorrect date
- 1/2/2019- **Level 1 Warning** issued for sample reporting deficiencies on container labels.
- 4/2/2019- **Level 1 Warning** issued for sample label and COC date discrepancy occurring on 2/6/2019
- 9/5/2019- **Level 1 Warning** issued for the following three (3) COC and sample container reporting discrepancies
- 9/5/2019- **Level 1 Warning** issued for sample entry errors, specifically: Sampling date 7/8/19 recorded as 6/8/19. Sampling date listed 7/16/2019 was actually, sampling date of 7/15/2019. Sampling date of 7/29/2019 COC recorded sampling date of 7/19/16.
- 11/25/2019- **Level 2 NOV** issued for BOD analysis hold time exceedance for sampling date 9/23/2019 - Event not completed on time non-compliance.
- 3/3/2020- **Level 2 NOV** issued because average of two sample methods (40 CFR Part 1664A HEM and 40 CFR Part 1664A HEM (Sulfur Corrected)) resulted in permit exceedance for sulfide.
- 7/30/2020- **Level 2 NOV** issued for failure to sample for Ammonia for the month of June 2020.

All violations were resolved in a timely manner. Based on the historic effluent quality and CMR's compliance history the City believes, pursuant to §13.12.050.G.3 OCCGF, that CMR's proposed discharge will be in compliance with the limitations established under Title 13 Chapter 12 of OCCGF.

RATIONALE FOR PERMIT LIMITATIONS:

Section 13.12.050.G OCCGF, in part, establishes that the City will issue an Industrial Wastewater Discharge Permit to the applicant if the City finds that the proposed discharge is in compliance with the limitations established in the Chapter. Therefore, establishing limitations in the proposed modified permit that meet the limitations established in Chapter 12, by *de-facto* satisfies this decision criterion. The rationale for modified permit limitations is intended to meet the requirements of Title 13 Chapter 12 OCCGF as described in the following sections.

Surcharge Thresholds

Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS) are subject to surcharges. Pursuant to §13.18.060, Sewer Extra Strength Charges shall be levied in accordance with the approved Utility Rate Schedule in effect at the time of the discharge. Billing will be based on monthly average concentration of each parameter and the total monthly discharge (flow) reported by the Permittee unless the Permittee has entered into an alternate agreement with the City for determining the monthly billing.

Permittee may choose to pay under the pretreatment sewer charges in accordance with the approved Utility Rate Schedule in effect at the time of the discharge.

General Prohibitions

OCCGF Title 13, Chapter 12 includes a General Prohibition that industrial users may not introduce into the POTW any pollutants which cause Pass Through or Interference. The City does not anticipate CMR will cause or contribute to Pass Through or Interference of the POTW. The permit will contain the General Prohibition from OCCGF Title 13, Chapter 12.

Specific Prohibitions

OCCGF Title 13, Chapter 12 includes a Specific Prohibition that an industrial user may not introduce into the POTW any pollutants which contain or cause any of the following:

1. Pollutants which create a fire or explosion hazard in the POTW. More specifically, no industrial user shall discharge any wastestream with a closed cup flashpoint of less than sixty (60) degrees Celsius (one hundred forty (140) degrees Fahrenheit) using the test methods specified in 40 CFR Section 261.21. The Director may require industrial users with the potential to discharge flammable, combustible or explosive substances to install and maintain an approved combustible gas detection meter or explosion hazard meter. No two (2) successive readings on an explosion hazard meter at the point of discharge shall be more than five (5) percent, nor any one (1) reading more than ten (10) percent, of the Lower Explosive Limit (LEL) of the meter.
2. Pollutants which will cause corrosive structural damage to the POTW but in no case discharges with pH lower than pH 5.5.
3. Solid or viscous substances which may cause obstruction in the sewage system or otherwise cause Interference to the POTW.
4. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause Pass Through or Interference with the POTW.
5. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds forty (40) °C (one hundred four (104) °F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits.
6. Stormwater drainage from ground resulting in Infiltration and Inflow (I&I) through the industrial user's service line(s), surface, roof drains, catch basins, unroofed area drains (e.g. commercial car washing facilities) or any other source unless otherwise approved by the Director. Specifically prohibited is the connection of roof downspouts, exterior foundation drains, areaway drains, or other sources of surface runoff or ground water to a building sewer or building drain which in turn is connected directly or indirectly to the City's wastewater collection system. No person shall connect or discharge water from underground drains, sump pump discharges, natural springs and seeps, water accumulated in excavation or grading or any other water associated with construction activities.
7. A Slug Discharge as defined in Section 13.12.020.A OCCGF.
8. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Pass Through or Interference.
9. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute health and safety hazards for employees of the City employed at the POTW.
10. Trucked or hauled pollutants except as authorized by the Director and only at discharge points designated by the Director.
11. Any water or waste which contains grease or oil or any other substances that will solidify or become discernibly viscous at temperatures between thirty-two (32) degrees Fahrenheit (32° F. or

0° Celsius) and one hundred fifty (150) degrees Fahrenheit (150° F or 65.5° Celsius) and cause or contribute to Interference or Pass Through.

12. Any pollutant directly into a manhole or other opening in the POTW unless specifically authorized by the City or as otherwise permitted under this Chapter. Prohibited is the opening of a manhole or discharging into any opening in violation of Title 13, Chapter 12 of OCCGF.
13. Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the City in compliance with applicable state or federal regulations.
14. Liquid wastes from chemical toilets, and trailers, campers or other recreational vehicles which have been collected and/or held in tanks or other containers shall not be discharged into the POTW except at locations authorized by the City to collect such wastes.

The City does not believe the process will result violation of specific prohibitions in accordance with 13.12.030 OCCGF.

Specific Discharge Limitations

Technology-Based Effluent Limits

Title 40, Chapter I, Subchapter N, Parts 405-471 of the Code of Federal Regulations (CFR) establish Effluent Guidelines and Standards (ELGs) for point source dischargers promulgated by the United States Environmental Protection Agency (EPA) as required by Section 307 (b) and (c) (33 U.S.C. 1317(b) and (c)) of the federal Clean Water Act (CWA). More specifically the ELGs contain industry specific technology-based effluent limits that constitute the pretreatment standards applicable to indirect point source dischargers. An indirect discharger is a point source discharger that discharges indirectly via a Publicly Owned Treatment Works (POTW), such as the City of Great Falls POTW. These prescribed pretreatment technology-based effluent limits are incorporated by definition in 13.12.020 OCCGF as Categorical Pretreatment Standards.

Section 13.12.030.C OCCGF requires all industrial users subject to a Categorical Pretreatment Standard to comply with said standard. As described in 40 CFR 405-471, Categorical Pretreatment Standards are generally applicable based on the industrial activity conducted at the site. Industrial activities can be classified by the Standard Industrial Classification (SIC) code established by the federal Occupational Safety and Health Administration and the North American Industry Classification System (NAICS) developed by the U.S. Economic Classification Policy Committee.

CMR's current refining operations are classified under SIC Code 2911 Petroleum Refining. Under SIC Code 2911, process wastewater is subject to categorical effluent limitation guidelines (ELGs) from 40 CFR 419 Petroleum Refining Point Source Category. The North American Industry Classification System (NAICS) for Petroleum Refineries is 324110.

The RDU refining operations are classified under SIC Code 2869 Industrial Organic Chemicals, Not Elsewhere Classified due to use of biomass feedstock. Under SIC Code 2869, process wastewater is subject to Federal Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) ELGs from 40 CFR 419.35, however, there is a specific exemption from these ELGs for biomass used as feedstock to generate organic chemical compounds (40 CFR 414.11(e)), and further explained in EPA, 2005, "Product and Product Group Discharges Subject to Effluent Limitations and Standards for the OCPSF Point Source Category." The feedstocks for CMR's proposed RDU will be exclusively plant and animal materials, therefore the 40 CFR 414 provisions (OCPSF ELGs), including Subpart K for Indirect Dischargers, are not applicable to RDU wastewaters. The North American Industry Classification System (NAICS) associated with the RDU is 324110.

Local Limits and Permit Specific Limits

Sections 13.12.030 C 2 and 4 OCCGF establish the City of Great Falls Maximum Contribution from significant industrial users, also referred to as “Local Limits” and the authority for facility or permit specific limits. In accordance with 40 CFR 403.5 (c), the City’s Local Limits are designed to establish the maximum concentration or total load the City may receive from permitted industrial users for certain toxic and prolific parameters in order to prevent Interference or Pass Through in the POTW and maintain compliance with the City’s MPDES permit. Therefore, the City finds, pursuant to §13.12.050.G.3, CMR discharge in compliance with the limits established below is not expected to result in a violation by the City of the terms and conditions of the City’s MPDES Permit or cause Pass Through or Interference.

Final Effluent Limits

Table 2 below provides a summary of the effluent limits. Additional rationale for each limit is explained below.

Table 2. Final Numeric Effluent Limits Outfall 001		
Parameter	Limit¹	Rationale
Flow	720,000 GPD	Refinery treatment plant design capacity
cBOD ₅	None ³	Permit Rationale & Section 13.18.060 OCCGF
TSS	None ³	Permit Rationale & Section 13.18.060 OCCGF
Oil & Grease, Total Recoverable	100 mg/L	Section 13.12.030.C.2 OCCGF 40 CFR 419.15
pH ²	Greater than or equal to 5.5 S.U. Less than 9.0 S.U.	Section 13.12.030.B.2 OCCGF and Permit Rationale
Arsenic, Total	1.57 mg/l	Section 13.12.030.C.2 OCCGF
Copper, Total	0.672 lbs per day	Section 13.12.030.C.2 OCCGF and allocations calculations
Selenium, Total	0.310 lbs per day	Section 13.12.030.C.2 OCCGF and allocation calculations
Ammonia	100 mg/L	40 CFR 419.15 Section 13.12.030.C.3 OCCGF
Cadmium, Total	3.51 mg/L	Section 13.12.030.C.2 OCCGF
Chromium III	0.57 mg/L	Section 13.12.030.C.2 OCCGF
Chromium VI	0.04 mg/L	Section 13.12.030.C.2 OCCGF
Chromium, Total	5.92 mg/L	Section 13.12.030.C.2 OCCGF
Lead, Total	0.14 mg/L	Section 13.12.030.C.2 OCCGF
Mercury, Total	0.02 mg/L	Section 13.12.030.C.2 OCCGF
Nickel, Total	0.59 mg/L	Section 13.12.030.C.2 OCCGF
Silver, Total	0.62 mg/L	Section 13.12.030.C.2 OCCGF
Zinc, Total	2.13 mg/L	Section 13.12.030.C.2 OCCGF
Sulfide, Total	3608 mg/L	Section 13.12.030.C.2 OCCGF
¹ All limits are daily maximum values unless specified otherwise. ² No discharge shall occur with a pH lower than 5.5 s.u. or above 9.0 s.u. Any pH discharge greater than or equal to 12.5 is subject to the hazardous waste reporting criteria required by 40 CFR 403.12(p) (1-4), section VI.B - Hazardous Waste Notification. This is an instantaneous limit. ³ No discharge limit associated with this parameter; however, surcharges are assessed for cBOD ₅ and TSS.		

Flow: The permit limit for flow is based on the CMR treatment plant design capacity.

cBOD₅ & TSS: In accordance with Section 13.18.060 OCCGF, surcharge fees apply for cBOD₅ and TSS. The City’s wastewater treatment plant, part of the POTW, was designed to remove BOD₅ (subsequently cBOD₅) and TSS. As of 2019, the influent loading was 56% of design capacity for cBOD₅ and 81% of design capacity for TSS. Capacity exists for the POTW to accept cBOD₅ and TSS. The City does not anticipate cBOD₅ and TSS from CMR to cause Pass Through or Interference with the wastewater treatment plant.

Oil & Grease: 40 CFR 419.15 includes oil & grease limits of 100 mg/L. Therefore, there is no reasonable potential for POTW Pass Through or Interference of oil & grease from CMR.

pH: pH limits are determined by Section 13.12.030.B.2 OCCGF and by 40 VFG 403.12(p)(1-4), section VLB – Hazardous Waste Notification. As part of Permit #13-01, pH was used as a surrogate parameter to warn when gas-phase hydrogen sulfide (H₂S) concentrations in the City POTW might exceed 10 ppm, and an upper pH limit for CMR effluent was set based on Montana Refining’s pretreatment system effluent data from 2009 to 2013. CMR’s pretreatment system underwent significant improvements in 2015-2016 which resulted in increased removal of sulfides through air-stripping. Reduction of dissolved free sulfides in the pretreatment system effluent, reduces the amount of H₂S expected in the gas-phase per Henry’s law. As such, the pH limit has been increased to 9.0 s.u. The pH limit is an instantaneous limit.

Metals: The POTW was not specifically designed for metals removal. Specific discharge limitations are established in Section 13.12.030.C.2 OCCGF for arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc. Industrial User permit limits have been established for arsenic, copper, selenium, cadmium, lead, mercury, nickel, silver, and zinc. The City’s MPDES permit includes effluent limits for arsenic and copper. There is reasonable potential for discharge of arsenic and copper from industrial users to cause POTW Interference. Additionally, the water quality standards (WQS) for selenium are low which creates reasonable potential for discharge of selenium to cause POTW Interference. Additional rationale for specific metals is included below:

- **Arsenic:** The City has particularly struggled to comply with the MPDES arsenic limit. Therefore, any exceptional arsenic loading could cause Pass Through.
- **Copper:** Load allocations for copper are based on total copper loading for all industrial users. The load limit is based on a proposed maximum daily discharge of 0.72 MGD.
- **Selenium:** Load allocation for selenium is based on total loading for all industrial users. The load limit is based on a proposed maximum daily discharge of 0.72 MGD.

Ammonia: 40 CFR 419.15 includes ammonia limits of 100 mg/L.

RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS:

Section 13.12.040, 13.12.050 I, and 13.12.070 OCCGF establish the authority and requirements for effluent compliance monitoring. CMR is required to use 40 CFR 136 methods or an approved Alternate Test Procedures for all sample analyses (13.12.070 OCCGF). Outfall 001 has discharge which constitutes Industrial Waste per Section 13.12.020 OCCGF.

Monitoring and Reporting Requirements

Tables 3 and 4 provide the Final Monitoring and Reporting Requirements. Rationale for monitoring parameters which do not have permit effluent limits is included following Table 3 and Table 4.

Sampling must be flow proportional.

Parameter	Units	Minimum Monitoring Frequency	Sample Type
Daily Flow	Gallons	Continuous	Meter
pH ¹	SUs	Weekly	Grab ⁴
Oil & Grease, Total Recoverable	mg/l	Weekly	Grab
Sulfide, Total	mg/l	Monthly	Grab
Chromium, Total	mg/l	Twice per year	Grab
Chromium III	mg/l	Twice per year	Calculated
Chromium VI	mg/l	Twice per year	Grab
Total Phenol ²	mg/L	Annually	Grab

¹ Permittee shall submit the daily minimum and maximum pH values on the monthly Discharge Monitoring Report.
² There is no permit limit associated with this monitoring parameter.

Parameter	Units	Minimum Monitoring Frequency ¹	Sample Type
pH ^{2,3}	SUs	Continuous	Meter
Ammonia, Total	mg/l	Once per month	Composite
Arsenic, Total	mg/l	Twice per year	Composite
Cadmium, Total	mg/l	Twice per year	Composite
Copper, Total	µg/l and lbs/day	Twice per year	Composite
Lead, Total	mg/l	Twice per year	Composite
Mercury, Total	mg/l	Twice per year	Composite
Nickel, Total	mg/l	Twice per year	Composite
Selenium, Total	µg/l and lb/day	Twice per year	Composite
Silver, Total	mg/l	Twice per year	Composite
Zinc, Total	mg/l	Twice per year	Composite
Biochemical Oxygen Demand, Carbonaceous (cBOD ₅) ⁴	mg/l	Weekly	Composite
Total Suspended Solids (TSS) ⁴	mg/l	Weekly	Composite
Nitrogen, Nitrate+Nitrite as N ⁴	mg/L	Annually	Composite
Nitrogen, Kjeldahl, Total as N ⁴	mg/L	Annually	Composite
Nitrogen, Total ⁴	mg/L	Annually	Composite
Phosphorus, Total as P ⁴	mg/L	Annually	Composite
Bis(2-ethylhexyl) Phthalate ⁴	µg/L	Annually	Composite

¹ Twice per year sampling for metals shall be completed during the first and third quarters or the second and fourth quarters
² The continuous pH monitoring probe is located at MP 002
³ See Rationale for Rationale for Special Conditions, Pretreatment Requirements and Best Management Practices, 2.
⁴ There is no permit limit associated with this monitoring parameter.

Nutrients: The Montana Department of Environmental Quality (DEQ) is in the process of establishing nutrient water quality standards (WQS) for the Missouri River. Nutrients are likely to become parameters of concern for Industrial Pretreatment in the future. No effluent limit for Total Kjeldahl Nitrogen (TKN),

Nitrogen, Nitrate + Nitrite as N, and total phosphorus (TP) are incorporated into this permit; however, monitoring will be required.

Total Phenol: The POTW's MPDES permit requires monitoring for total phenols.

Bis(2-ethylhexyl) Phthalate: The POTW's MPDES permit requires monitoring for Bis(2-ethylhexyl) Phthalate.

Reporting Requirements: Reporting must include daily high and low PH during the reporting period and records of all pH measurements during the period. Each pH violation must be reported separately with an explanation for the violation.

Submit hydrogen sulfide (H₂S) gas and temperature monitoring data at three-hour intervals using meters. Submit annual proof of meter calibration.

Submit annual proof of wastewater meter calibration.

RATIONALE FOR SPECIAL CONDITONS:

Pretreatment Requirements and Best Management Practices

As mentioned previously Section 13.12.050.G. OCCGF, in part, establishes that the City will issue an Industrial Wastewater Discharge Permit to an applicant only if the City finds that the proposed discharge is in compliance with the limitations established in the Chapter. Section 13.12.030.C.4 OCCGF establishes that the City may impose requirements in addition to Local Limits and permit specific effluent limits including pretreatment requirements and best management practices, when the City finds they are necessary to comply with the Chapter (12). Section 13.12.040 reinforces the requirement for pretreatment further by requiring industrial users to provide necessary wastewater treatment in order to comply with the Chapter.

The City requires the following Pretreatment Requirements and Best Management Practices:

1. CMR shall operate and maintain, in good working order the pretreatment system, associated chemical feed systems, pumps, and control systems.
2. CMR shall continuously monitor pH through a continuous pH monitoring probe and a pH transmitter shall be tied into the Plant Distributed Control System (DCS).
 - a. When pH is out of permitted range, the continuous monitoring system shall automatically shut down the discharge to the POTW. Discharge to the POTW shall not be restarted until pH is within the permitted range.
 - b. When the continuous pH monitoring system is inoperable due to calibration, routine maintenance, or malfunction, the Permittee shall analyze a grab sample for pH once an hour at Monitoring Point 001.
 - c. The Permittee shall operate the continuous pH monitoring system in compliance with EPA Method 150.2 including meter calibration.
 - d. All Calibration records shall be recorded in a numbered and bound laboratory notebook.
 - e. When the continuous pH meter records a pH of 6.0 standard units or lower or a reading of 9.0 standard units or higher, an additional pH grab sample shall be taken within 15 minutes.
 - f. Continuous pH monitoring is for compliance with pH limits. Grab sample pH monitoring is for process control only.
3. If modifications to the pretreatment system, including but not limited to, modifications to the existing process and/or use of chemicals, CMR shall inform the City in writing thirty (30) days prior to modifications.

Compliance Schedule

Submittal of additional documentation is required as part of the following compliance schedule.

- **Compliance must be achieved within 90 days of the effective date of permit:**
 - Submit updated Spill Prevention, Control, and Countermeasure Plan
 - Install hydrogen sulfide (H₂S) and temperature meters at Outfall 001.
- **Compliance must be achieved within 365 days of effective date of permit:**
 - Provide notification no later than 30 days after taking B/Y DAF out of service. Submit updated Pretreatment system process flow diagram.

Submittal of Additional Documentation***Spill Prevention, Control, and Countermeasure Plan***

A spill prevention, control, and countermeasure (SPCC) plan in accordance with Section 13.12.080.G.3 OCCGF is required. The existing SPCC Plan shall be updated to reflect any changes associated with the RDU addition (including new impervious surface stormwater upgrades), site modifications, and updated emergency contact information. The existing SPCC Plan Section 14 must be updated to include updated drawings showing location of sewer boxes and map of stormwater collection system. The SPCC Plan includes elements of a Slug Control Plan in accordance with Section 13.12.080.G and elements of a Stormwater Control Plan.

PUBLIC PARTICIPATION:

The Official Code of the City of Great Falls at 13.12.050 G 2 requires, “Where the City is establishing permit specific Pretreatment Standards, the permit shall be noticed for public comment for thirty (30) days in a newspaper of general circulation that provides meaningful public notice.” Pretreatment Standard is defined at Section 13.12.020 OCCGF as any regulation containing pollutant discharge limits promulgated by the EPA in accordance with section 307(b) and (c) of the Act [Federal Clean Water Act], which applies to industrial users. A number of the proposed and modified pretreatment requirements and best management practices proposed in the permit meet the definition of a Pretreatment Standard. As such, on December 13, 2021, notice was posted in the Great Falls Tribune that comments would be taken for 30 days on the proposed modified permit.

REFERENCES:

Calumet Montana Refining, Industrial Wastewater Permit Application Renewal Form Amendment and Attachments, August 24, 2021 and September 28, 2021.

Official Code of the City of Great Falls, Title 13, Chapter 12, *Industrial Pretreatment Program*

US Code of Federal Regulations, 40 CFR Parts 400-471, *Effluent Guidelines and Standards*

US Code, Title 33, Sections 1251-1387, *Federal Water Pollution Control Act*, as amended.

Permit # 01-22
INDUSTRIAL WASTEWATER DISCHARGE PERMIT
Calumet Montana Refining, LLC
1900 10th Street N.E.
Great Falls, MT 59404

In compliance with The Official Code of the City of Great Falls Title 13, Chapters 2 and 12, (herein referred to as the City Code) **Calumet Montana Refining, LLC** (herein referred to as the Permittee) is hereby authorized by the City of Great Falls (herein referred to as the City or the Control Authority), to discharge wastewater to the sanitary sewer and the City Publicly Owned Treatment Works (herein referred to as the POTW) from the above identified facility, in accordance with the effluent limitations, monitoring requirements, and other conditions set forth in this Industrial Wastewater Discharge Permit (herein referred to as the Permit).

It is the Permittee’s duty to comply with all applicable Federal, State and local laws whether or not they are specifically incorporated in the permit. A violation in any of the terms of the permit constitutes a violation of the Official Code of the City of Great Falls (herein identified as the City Code) and will subject the Permittee to enforcement action.

It is the Permittee’s duty to reapply for renewal of this permit as required in Part IV H of this permit.

This permit shall become effective on **[DRAFT]** and shall expire at midnight on **[DRAFT]**.

Issued by the City of Great Falls

DRAFT

 Paul Skubinna, Director of Public Works Date

The contact information for the Control Authority is:

Industrial Pretreatment Program
 City of Great Falls Public Works Department
 P.O. Box 5021
 Great Falls, MT 59403
 406-727-8390

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Part I Facility Information

A. General Facility Information

Industry Name: Calumet Montana Refining, LLC

Industry Address: 1900 10th Street N.E.
Great Falls, MT 59404

Industry Contact: Wayne Leiker, Vice President – Refining Operations

Industrial Category: SIC Code: 2911 Petroleum Refining
SIC Code: 2869 Industrial Organic Chemicals, Not Elsewhere Classified
NAICS Code: 324110 Petroleum Refineries
40 CFR 419.35 Petroleum Refining

Wastewaters to be Discharged: A. Domestic wastewater.

B. Process wastewater that meets the limits and conditions of this permit with adequate treatment to achieve compliance with a Pretreatment Standard or requirement.

Wastewaters not to be Discharged: Any process wastewater that exceeds the limits of this permit, does not meet the conditions of this permit or City Code, or does not conform to any applicable Federal, State or Local Regulation.

B. Outfalls

Description and Location of Outfall 001

Outfall 001 is located on the southern boundary of the refinery property and discharges to City Manhole #4070. Calumet Montana Refining, LLC is the last discharger on this sewer line prior to this sewer line entering the wastewater treatment plant.

C. Monitoring Point(s)

Both Monitoring Points are located directly before the flow meter on the line that discharges to City Manhole #4070.

- **Monitoring Point 001 (MP001)** MP001 is located directly before the flow meter on the line that discharges to City Manhole #4070. This 1-inch connection has a ball valve installed for collection of grab samples.
- **Monitoring Point 002 (MP002)** MP002 is located directly before the flow meter on the line that discharges to City Manhole #4070. This 1-inch line is connected to a composite sampler.

Part II Effluent Limitations

A. Special Effluent Limitations

It shall be unlawful for the Permittee to discharge, deposit, cause, or allow to be discharged any waste or wastewater which fails to comply with the limitations imposed by this Permit.

B. Dilution Prohibition

Dilution is prohibited as a substitute for treatment and shall be a violation of this Permit. Except where expressly authorized to do so by an applicable Pretreatment Standard or requirement, Permittee shall not increase the use of process water, or in any other way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with a Pretreatment Standard or requirement.

C. Specific Effluent Limitations

The wastewater discharged from the Permittee that is regulated by this Permit is subject to all local limitations outlined in the City Code, whether or not the constituent is listed in this Permit, and all applicable categorical standards. Effective upon permit issuance, the Permittee shall not discharge wastewater containing any of the parameters in excess of the listed maximums:

Limits for Monitoring Points 001 (MP001) and 002 (MP002)

Parameter	Limits ¹	Reference
Flow	720,000 GPD	Refinery treatment plan design capacity
pH	Greater than or equal to 5.5 s.u. ² and less than or equal to 9.0 s.u.	Section 13.12.030.B.2 OCCGF
Ammonia	100 mg/L	40 CFR 419.15 Section 13.12.030.C.3 OCCGF
Oil & Grease, Total Recoverable	100 mg/L	40 CFR 419.15 Section 13.12.030.C.2 OCCGF
Arsenic, Total	1.57 mg/l	Section 13.12.030.C.2 OCCGF
Cadmium, Total	3.51 mg/L	Section 13.12.030.C.2 OCCGF
Chromium III	0.57 mg/L	Section 13.12.030.C.2 OCCGF
Chromium VI	0.04 mg/L	Section 13.12.030.C.2 OCCGF
Chromium, Total	5.92 mg/L	Section 13.12.030.C.2 OCCGF
Copper, Total	0.672 lbs per day	Section 13.12.030.C.2 OCCGF and copper allocation
Lead, Total	0.14 mg/L	Section 13.12.030.C.2 OCCGF
Mercury, Total	0.02 mg/L	Section 13.12.030.C.2 OCCGF
Nickel, Total	0.59 mg/L	Section 13.12.030.C.2 OCCGF
Silver, Total	0.62 mg/L	Section 13.12.030.C.2 OCCGF
Selenium, Total	0.310 lbs per day	Section 13.12.030.C.2 OCCGF and selenium allocation.
Zinc, Total	2.13 mg/L	Section 13.12.030.C.2 OCCGF
Sulfide, Total	3,608 mg/L	Section 13.12.030.C.2 OCCGF
¹ All limits are daily maximum values unless specified otherwise.		
² No discharge shall occur with a pH lower than 5.5 s.u. or above 9.0 s.u. Any pH discharge greater than or equal to 12.5 is subject to the hazardous waste reporting criteria required by 40 CFR 403.12(p) (1-4), section VI.B – Hazardous Waste Notification. This is an instantaneous limit.		

D. Surcharge Thresholds

Sewer Extra Strength Charges shall be levied in accordance with the approved Utility Rate Schedule in effect at the time of the discharge. Billing will be based on monthly average concentration of each parameter and the total monthly discharge reported by the Permittee unless the Permittee has entered into an alternate agreement with the City for determining the monthly billing.

Permittee may choose to pay under the pretreatment sewer charges in accordance with the approved Utility Rate Schedule in effect at the time of the discharge.

E. General Prohibitions

The Permittee may not introduce into the POTW any pollutant(s) which cause Pass Through or Interference. These general prohibitions and the specific prohibitions in paragraph F of this section apply to every Industrial User introducing pollutants into the POTW whether or not the Industrial User is subject to other Pretreatment Standards or Requirements.

F. Specific Prohibitions

It shall be unlawful for the Permittee to discharge or deposit or cause or allow to be discharged or deposited into the wastewater treatment system of the City any wastewater which contains the following:

1. Pollutants which create a fire or explosion hazard in the POTW. More specifically, the Permittee shall not discharge any wastestream with a closed cup flashpoint of less than sixty (60) degrees Celsius (140 degrees Fahrenheit) using the test methods specified in 40 CFR Section 261.21. The Director may require Industrial Users with the potential to discharge flammable, combustible or explosive substances to install and maintain an approved combustible gas detection meter or explosion hazard meter. No two successive readings on an explosion hazard meter at the point of discharge shall be more than five percent (5%), nor any one reading more than ten percent (10%), of the Lower Explosive Limit (LEL) of the meter.
2. Pollutants which will cause corrosive structural damage to the POTW but in no case discharges with pH lower than pH 5.5.
3. Solid or viscous substances which may cause obstruction in the sewage system or otherwise cause Interference to the POTW.
4. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause Pass Through or Interference with the POTW.
5. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40 °C (104 °F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits.
6. Stormwater drainage from ground resulting in Infiltration and Inflow (I&I) through the Permittee's service line(s), surface, roof drains, catch basins, unroofed area drains (e.g. commercial car washing facilities) or any other source unless otherwise approved by the Director. Specifically prohibited is the connection of roof downspouts, exterior foundation drains, areaway drains, or other sources of surface runoff or ground water to a building sewer or building drain which in turn is connected directly or indirectly to the City's wastewater collection system. No person shall connect or discharge water from underground drains, sump pump discharges, natural springs and seeps, water accumulated in excavation or grading or any other water associated with construction activities.
7. A Slug Discharge as defined in Section 13.12.020.A of City Code.
8. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Pass Through or Interference.
9. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute health and safety hazards for employees of the City employed at the POTW.
10. Trucked or hauled pollutants except as authorized by the Director and only at discharge points designated by the Director.
11. Any water or waste which contains grease or oil or any other substances that will solidify or become discernibly viscous at temperatures between thirty-two degrees Fahrenheit (32° F. or 0°

Celsius) and one hundred fifty degrees Fahrenheit (150° F or 65.5° Celsius) and cause or contribute to Interference or Pass Through.

12. Any pollutant directly into a manhole or other opening in the POTW unless specifically authorized by the City or as otherwise permitted under Title 13, Chapter 12 of the Official Code of the City of Great Falls. Prohibited is the opening of a manhole or discharging into any opening in violation of Title 13, Chapter 12 of City Code.
13. Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the City in compliance with applicable state or federal regulations.
14. Liquid wastes from chemical toilets, and trailers, campers or other recreational vehicles which have been collected and/or held in tanks or other containers shall not be discharged into the POTW except at locations authorized by the City to collect such wastes.

Part III Monitoring and Reporting Requirements

A. Sample Collection

Compliance determinations with respect to prohibitions and limitations in Title 13, Chapter 12 of City Code may be made on the basis of either grab or composite samples of wastewater as specified by the City. Such samples shall be taken at a point or points which the City determines to be suitable for obtaining a representative sample of the discharge. Composite samples may be taken over a twenty-four (24) hour period, or over a longer or shorter time span, as determined by the City to meet specific circumstances.

B. Sample Type

Samples collected to satisfy reporting requirements must be based on data obtained through appropriate sampling and analysis performed during the period covered by the report, and based on data that is representative of conditions occurring during the reporting period.

1. Except as indicated in subparagraphs 2 and 3 below, the Permittee must collect representative wastewater samples using 24-hour flow proportional composite sampling techniques, unless time-proportional composite sampling or grab sampling is required by the City. All samples must be representative of the permitted discharge.
2. Samples for oil and grease, temperature, pH, cyanide, total phenols, sulfides, and volatile organic compounds must be obtained using grab collection techniques. Using protocols (including appropriate preservation) specified in 40 CFR Part 136 and appropriate EPA guidance, multiple grab samples collected during a 24-hour period may be composited prior to the analysis as follows: for cyanide, total phenols, and sulfides the samples may be composited in the laboratory or in the field; for volatile organics and oil and grease, the samples may be composited in the laboratory. Compositing samples for other parameters unaffected by the compositing procedures as documented in 40 CFR Part 136 may be authorized by the City, as appropriate. In addition, grab samples may be required to show compliance with instantaneous local limits, including pH.
3. For sampling required in support of Baseline Monitoring Reports and 90-Day Compliance Reports required in Section 13.12.080 of City Code, a minimum of four (4) grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organic compounds for facilities for which historical representative sampling data do not exist. Where historical data are available, the City may authorize a lower minimum. For the reports required by Section 13.12.080 of City Code and by this permit, the Permittee is required to collect the number of grab samples necessary to assess and assure compliance with applicable Pretreatment Standards and Requirements.

C. Analytical Requirements

All pollutant analysis, including sampling techniques, to be submitted as part of a Permit requirements shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments

thereto, unless otherwise specified in an applicable Categorical Pretreatment Standard. If 40 CFR 136 does not contain sampling or analytical techniques for the pollutant in question, or where the EPA determines that the Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analyses shall be performed by using validated analytical methods or any other applicable sampling and analytical procedures, including procedures suggested by the City or other parties approved by the EPA.

Self Monitoring for Monitoring Point 001 (MP 001)

Parameter	Unit of Measurement	Frequency	Sample Type
Daily Flow	Gallons	Continuous	Meter
pH ¹	SU	Weekly	Grab
Oil & Grease, Total Recoverable	mg/L	Weekly	Grab
Sulfide, Total	mg/l	Monthly	Grab
Chromium, Total	mg/l	Twice per Year	Grab
Chromium III	mg/l	Twice per Year	Calculated
Chromium VI	mg/l	Twice per Year	Grab
Total Phenol	mg/L	Annually	Grab
¹ Permittee shall submit the daily minimum and maximum pH values on the monthly Discharge Monitoring Report.			

Self Monitoring for Monitoring Point 002 (MP002)

Parameter	Unit of Measurement	Frequency¹	Sample Type
pH ^{2,3}	SU	Continuous	Meter
Ammonia, Total	mg/L	Monthly	Composite
Arsenic, Total	mg/l	Twice Per Year	Composite
Cadmium, Total	mg/l	Twice Per Year	Composite
Copper, Total	μg/L lbs/day	Twice Per Year	Composite
Lead, Total	mg/l	Twice Per Year	Composite
Mercury, Total	mg/l	Twice Per Year	Composite
Nickel, Total	mg/l	Twice Per Year	Composite
Selenium, Total	μg/L lbs/day	Twice Per Year	Composite
Silver, Total	mg/l	Twice Per Year	Composite
Zinc, Total	mg/l	Twice Per Year	Composite
Biochemical Oxygen Demand, Carbonaceous (cBOD ₅)	mg/l	Weekly	Composite
Total Suspended Solids	mg/l	Weekly	Composite
Nitrogen, Nitrate+Nitrite as N	mg/l	Annually	Composite
Nitrogen, Kjeldahl, Total as N	mg/l	Annually	Composite
Nitrogen, Total	mg/l	Annually	Composite
Phosphorus, Total as P	mg/l	Annually	Composite
Bis(2-ethylhexyl) Phthalate	μg/L	Annually	Composite

¹Twice per year sampling for metals shall be completed during the first and third quarters or the second and fourth quarters.
²The continuous pH monitoring probe is located in this line.
³See Special Condition D.

1. Submit hydrogen sulfide (H₂S) gas and temperature monitoring data at three-hour intervals using meters. Submit annual proof of meter calibration.
2. Submit annual proof of wastewater meter calibration.

D. Sampling Performed in Excess of Minimum Frequencies

If the Permittee monitors any regulated pollutant at the appropriate sampling location more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the parameters. Such increased frequency shall also be indicated.

E. Recordkeeping

1. The Permittee shall retain, and make available for inspection and copying, all records, reports, monitoring or other data, applications, permits and all other information and documentation

required by Title 13, Chapter 12 of City Code including documentation associated with Best Management Practices.

2. Such records shall include for all samples:
 - a. The date, exact place, method, and time of sampling and the names of the person or persons taking the samples;
 - b. The dates analyses were performed;
 - c. Who performed the analyses;
 - d. The analytical techniques/methods use; and
 - e. The results of such analyses.

F. Records Retention

The Permittee shall retain such records and shall keep such records available for inspection for at least three (3) years. This recordkeeping period shall be extended automatically for the duration of any litigation concerning the Permittee's compliance with any provision of Title 13, Chapter 12 of City Code, or when the Permittee has been specifically and expressly notified of a longer records retention period by the Director.

G. Signatory Certification

All reports and other submittals required to be submitted to the City shall include the following statement and signatory requirements.

1. The Authorized Representative of the Industrial User signing any application, questionnaire, report or other information required to be submitted to the City must sign and attach the following certification statement:
 "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations."
2. If the Authorized Representative is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for environmental matters for the company, a new authorization satisfying the requirements provided in the definition of Authorized Representative of the Industrial User (Section 13.12.020 of City Code) must be submitted to the City prior to or together with any reports to be signed by an authorized representative.
3. Reports, if mailed, shall be addressed to the Control Authority at the following address:
 Industrial Pretreatment Program
 City of Great Falls Public Works Department
 P.O. Box 5021
 Great Falls, MT 59403
4. Reports may be hand delivered to the Control Authority at the following address:
 City of Great Falls Public Works Department
 Administration Building
 1005 25th Avenue Northeast
 Great Falls MT 59404

H. Reporting Requirements

Compliance reports containing the following information shall be submitted monthly unless otherwise specified in Part III of this permit. The reports are due on or before the 28th day of the month following

the reporting period. The report must be postmarked or received (if hand delivered) by the City on or before the due date.

1. Concentrations and measurements of all parameters for which there are self-monitoring requirements shall be submitted. Legible copies of completed chain-of-custody (COC) forms, and laboratory analytical reports for all samples analyzed by a contract laboratory shall be included.
2. Daily average (average gallons per discharge day) and total monthly flows (gallons) reported for each month in the reporting period from Outfall 001 shall be submitted. The City may allow for verifiable estimates of these flows were justified by cost or feasibility considerations.
3. Daily high and low pH during the reporting period shall be submitted. Each pH violation must be reported separately with an explanation for the violation. Additionally, records of all pH measurements for the reporting period shall be submitted. The individual records for the reporting period may be submitted as graphs or in tabular form with the pH measurement, date and time scales clearly indicated.
4. If no discharge occurs during the reporting period, "no discharge" shall be reported in lieu of the requirements listed above for each calendar month during which no discharge occurred.
5. All reports and other documents required by this permit shall follow the signatory requirement outlined in Part III. G of this permit.
6. All wastewater samples must be representative of the Permittee's discharge. Wastewater monitoring and flow measurement facilities shall be properly operated, kept clean, and maintained in good working order at all times. The failure of an Industrial User to keep its monitoring facility in good working order shall not be grounds for the Industrial User to claim that the sample results are unrepresentative of its discharge.
7. The sampling and analyses required for the reporting outlined above may be performed by the City in lieu of the Permittee. Where the City itself makes arrangements with the Permittee to collect all the information required for the report, the Permittee will not be required to submit the report.
 - a. If the Permittee monitors any regulated pollutant at the permitted sampling location more frequently than required by this permit, the Permittee shall use approved analytical methods and the results of such monitoring shall be reported on the monthly DMR.
8. Within 90 days following the date for final compliance with applicable Categorical Pretreatment Standards or in the case of a New Source following commencement of the introduction of wastewater into the POTW for which the Permittee reports a discharge, new Industrial Users subject to Categorical Pretreatment Standards are required to provide the report as described in 40 CFR 403.12 (d), which are listed below.
 - a. The Industrial User shall submit the measured average daily and maximum daily flow in gallons per day to the POTW from regulated process wastestreams other streams as necessary to allow the use of the combined wastestream formula in 40 CFR 403.6 (e). The Control Authority may allow for verifiable estimates of these flows where justified by cost of feasibility.
 - b. The Industrial User shall identify the pretreatment standards applicable to each regulated process.
 - c. The Industrial User shall submit the results of sampling and analysis identifying the nature and concentration (or mass, where required by the standard or Control Authority) of regulated pollutants in the discharge from each regulated process. Both daily maximum and average concentration (or mass where required) shall be reported. Samples shall be representative of daily operations. In cases where the standard requires compliance with a Best Management Practice or pollution prevention alternative, the Industrial User shall submit the documentation as required by the Control Authority or the applicable Standards to determine compliance with the Standard.
 - d. The Industrial User shall take a minimum of one representative sample to compile the data necessary to comply with the requirements of this section.

- e. Samples shall be taken immediately downstream from pretreatment facilities if such exists or immediately downstream from the regulated process if no pretreatment exists. If other wastewaters are mixed with the regulated wastewater prior to pretreatment the Industrial User should measure the flows and concentrations necessary to allow the use of the combined wastestream formula in 40 CFR 403.6 (e) this adjusted limit along with supporting data shall be submitted to the control authority.
- f. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto. Where 40 CFR 136 does not contain sampling or analytical techniques for the pollutant in question or where the EPA determines that the parts 136 sampling and analytical are inappropriate for the pollutant in question, sampling and analysis shall be performed by using validated analytical methods or any other applicable sampling and analytical procedures including procedures suggested by the POTW or other parties approved by the EPA.
- g. The 90 day compliance report shall indicate the time, date and place of sampling and methods of analysis and shall certify that such sampling and analysis is representative or normal work cycles and expected pollutant discharges to the POTW.
- h. A statement reviewed by the Authorized Representative of the Industrial User and certified to by a qualified professional, indicating whether pretreatment standards are being met on consistent basis, and, if not, whether additional operation and maintenance and/or additional pretreatment is required for the Industrial User to meet the Pretreatment Standards and requirements.
- i. If additional pretreatment and/or operation and maintenance is required to meet the Pretreatment Standards, the completion date in this schedule shall not be later than the compliance date established for the applicable Pretreatment Standard.
- j. Where the Industrial User's categorical Pretreatment Standard has been modified by a removal allowance (§403.7), the combined wastestream formula (§403.6 (e)) and/or a fundamentally different factors variance (§403.13) and after the Industrial User submits the report required by this section, the information required by paragraphs i and j of this section, shall be submitted by the user to the control authority within 60 days after the modified limit is approved.
- k. For CIUs subject to equivalent mass or concentration limits established by the POTW [40 CFR 403.6(c)], the report must contain a reasonable measure of the IU's long-term production rate. For CIU subject to categorical pretreatment standards expressed in terms of allowable pollutant discharge per unit of production (or another measure of operation), the report must include the IU's actual production during the appropriate sampling period.

I. 24 Hour Notice and 30 Day Re-sampling

If sampling performed by the Permittee indicates a violation of Title 13, Chapter 12 of City Code, the Permittee shall notify the City within 24 hours of becoming aware of the violation. The Permittee shall also repeat the sampling and analysis and submit the results of the repeat analysis to the City within thirty (30) days after becoming aware of the violations. The certification statement in section III G 1 shall be submitted with the results of the repeat analysis. The Permittee is not required to resample if the following occurs:

1. The City performs sampling at the Permittee's facility at a frequency of at least once per month.
2. The City performs sampling at the Permittee's facility between the time when the Permittee performs its initial sampling and the time when the Permittee receives the results of this sampling. It is the sole responsibility of the Permittee to verify if the City has performed this sampling.

J. Notification of the Discharge of Hazardous Waste

1. The Permittee shall notify the City, in writing, of any discharge into the POTW of a substance which, if otherwise disposed of, would be hazardous waste under 40 CFR Part 261. Such notification to the City shall be made within the appropriate time frames specified in Section 13.12.080 paragraphs F, H, and L of City Code.

Such notification must include:

- a. The name of the hazardous waste as set forth 40 CFR Part 261;
 - b. The EPA hazardous waste number;
 - c. The type of discharge (continuous, batch, or other);
 - d. An identification of the hazardous constituents contained in the wastes;
 - e. An estimation of the mass and concentration of such constituents in the wastestream discharged during that calendar month;
 - f. An estimation of the mass of constituents in the wastestream expected to be discharged during the following twelve (12) months;
 - g. Certification that the Permittee has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined to be economically practical; and
 - h. Signatory certification as required by Part III. G of this permit.
2. The Permittee shall notify the EPA Regional Waste Management Division Director, and state hazardous waste authorities, in writing, of the discharge into the POTW of a substance which, if otherwise disposed of, would be hazardous waste under 40 CFR Part 261 and meets the reporting criteria specified at 40 CFR 403.12(p). Notification to the State and EPA is the responsibility of the Permittee and shall be made as required under 40 CFR §403.12(p). The Permittee shall copy the City on all notifications made to the State and EPA.
 3. This provision does not create a right to discharge any substance not otherwise allowed to be discharged by Title 13, Chapter 12 of City Code, a permit issued hereunder, or any applicable federal or state law.

K. Change in Discharge or Operations

1. The Permittee shall file a notification to the City a minimum of fourteen (14) days prior to any planned significant change in operations or wastewater characteristics. A significant change shall be a change equal to or greater than twenty (20) percent in the mass of a pollutant or volume of flow discharged to the POTW. In addition, this notification shall include:
 - a. Adding or removing processing, manufacturing or other production operations.
 - b. New substances used which may be discharged.
 - c. Changes in the listed or characteristic hazardous waste for which the Permittee has submitted or is required to submit information to the City as required by paragraph J above, Title 13, Chapter 12 of City Code and 40 CFR Section 403.12(p) as amended.
 - d. The certification statement in section III G 1.

L. Accidental Discharge Report

1. In the case of any discharge, including, but not limited to, spills, accidental discharges, discharges of a nonroutine, episodic nature, a noncustomary batch discharge, a slug discharge or a discharge that may cause potential problems of the POTW, the Permittee shall notify the City of the incident immediately. The Control Authority must be notified by telephone at 727-8390. The notification shall include:
 - a. Name of the facility.
 - b. Location of the facility.
 - c. Name of the caller.

- d. Date and time of the discharge.
 - e. Date and time discharge was halted.
 - f. Location of discharge.
 - g. Estimated volume of the discharge.
 - h. Estimated concentration of pollutants in the discharge.
 - i. Corrective actions taken to halt the discharge.
 - j. Method of disposal, if applicable.
2. All instances of accidental discharge shall be followed up with a written report. This report shall be mailed within five (5) days of the discharge. The report shall contain the following as found in 40 CFR 403.16 (c) (3) and City Code:
 - a. A description of the accidental discharge, upset, slug; the cause; and the impact on the Permittee's compliance status. The description should also include the location of the discharge, type, concentration, and volume of waste.
 - b. Duration of noncompliance, including exact dates and times of noncompliance. If the noncompliance continues, the time by which compliance is reasonably expected to occur.
 - c. All steps taken or to be taken to reduce, eliminate, and prevent recurrence of such an upset, slug, accidental discharge, or other conditions of noncompliance.
 - d. The reporting certification statement signed by an authorized representative:
 3. Notification shall not relieve the Permittee of any expense, loss, damage, or other liability which may be incurred as a result of damage to the POTW, natural resources, or any other damage to person or property; nor shall such notification relieve the Permittee of any fines, penalties, or other liability which may be imposed by the City Code, or other applicable law.

Part IV General Conditions

A. Right of Entry

1. Whenever it shall be necessary for the purposes of this Chapter, the City may enter upon any Industrial User's facility, property, or premises subject to Title 13, Chapter 12 of City Code that is located or conducted or where records are required to be kept for the purposes of:
 - a. Performing all inspection, surveillance and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and Requirements by an Industrial User including the taking of photographs. Compliance monitoring and inspection shall be conducted at a frequency as determined by the City and may be announced or unannounced;
 - b. Examining and copying any records required to be kept under the provisions of this Chapter;
 - c. Inspecting any monitoring equipment or method, pretreatment system equipment and/or operation;
 - d. Sampling any discharge of wastewater into POTW; and/or
 - e. Inspecting any production, manufacturing, fabricating or storage area where pollutants, regulated under this Chapter, could originate, be stored, used, or be discharged to the POTW.
2. The occupant of such property or premises shall render all proper assistance in such activities. Where an Industrial User has security measures in place which require proper identification and clearance before entry into its premises, the Industrial User shall make necessary arrangements with its security personnel so that authorized representatives of the City will be permitted to enter without delay to perform their specified functions.

3. The Director and other duly authorized agents and employees of the City are entitled to enter all private properties through which the City holds an easement.

B. Compliance with Permit

Compliance with this Permit does not relieve the Permittee of its obligation to comply with any and all applicable pretreatment regulations, standards, or requirements under local, State, and Federal laws whether or not they are specifically incorporated in this Permit, including any such regulations, standards, requirements, or laws that may become effective during the term of this Permit. The POTW is a domestic sewage treatment facility; industrial waste is accepted only when such waste is deemed acceptable to the POTW. This Permit is issued to the Permittee for specific activities at the above permitted address.

C. State and Federal Requirements

Nothing in the permit shall relieve the Permittee of the responsibility to meet the requirements of any applicable State or Federal regulations.

D. Confidential Information-Disclosure of Information and Availability to the Public

1. All records, reports, data or other information supplied by any person or Industrial User as a result of any disclosure required by Title 13, Chapter 12 of City Code, or information and data from inspections shall be available for public inspection, except as otherwise provided in this Section, 40 CFR Section 403.14 and the Montana Open Records Law (Mont. Code Ann. Section 2-6-401 et. seq.)
2. These provisions shall not be applicable to any information designated as a trade secret by the person supplying such information. Materials designated as a trade secret may include, but shall not be limited to processes, operations, style of work or apparatus, or confidential commercial or statistical data. Any information and data submitted by the Permittee which is desired to be considered a trade secret shall have the words, "Confidential Business Information," stamped on each page containing such information. The Permittee must demonstrate to the satisfaction of the City that the release of such information would divulge information, processes or methods of production entitled to protection as trade secrets of the Permittee.
3. Information designated as a trade secret pursuant to this Section shall remain confidential and shall not be subject to public inspection. Such information shall be available only to officers, employees or authorized representatives of the City charged with implementing and enforcing the provisions of this Chapter and properly identified representatives of the U.S. Environmental Protection Agency and the Montana Department of Environmental Quality.
4. Effluent data from any Industrial User whether obtained by self-monitoring, monitoring by the City or monitoring by any State or Federal agency, shall not be considered a trade secret or otherwise confidential. All such effluent data shall be available for public inspection.

E. Permit Modification

The City may modify an Industrial Discharge Permit for good cause, including, but not limited to, the following reasons:

1. To incorporate any new or revised federal, state, or local Pretreatment Standards or Requirements;
2. To address significant alterations or additions to the Permittee's operation, processes, or wastewater volume or character since the time of the Industrial Discharge Permit issuance;
3. A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;
4. Information indicating that the permitted discharge poses a threat to the POTW, City personnel, or the receiving waters;
5. Violation of any terms or conditions of the Industrial Discharge Permit;

6. Misrepresentations or failure to fully disclose all relevant facts in the Industrial Discharge Permit application or in any required reporting; or
7. To correct typographical or other errors in the Industrial Discharge Permit.

F. Permit Revocation

A violation of the conditions of a permit or of this Chapter or of applicable state and federal regulations shall be reason for revocation of such permit by the City. Upon revocation of the permit, any wastewater discharge from the affected Industrial User shall be considered prohibited and in violation of this Chapter. Grounds for revocation of a permit include, but are not limited to, the following:

1. Failure of an Industrial User to accurately disclose or report the wastewater constituents and characteristics of their discharge;
2. Failure of the Industrial User to report significant changes in operations or wastewater constituents and characteristics;
3. Refusal of access to the Industrial User's premises for the purpose of inspection or monitoring;
4. Falsification of records, reports or monitoring results;
5. Tampering with monitoring equipment;
6. Violation of conditions of the permit;
7. Misrepresentation or failure to fully disclose all relevant facts in the Industrial Discharge Permit application;
8. Failure to pay fines or penalties;
9. Failure to pay sewer charges;
10. Failure to pay permit and sampling fees; or
11. Failure to meet compliance schedules.

G. Transfer Prohibited

Industrial Discharge Permits are issued to a specific Industrial User for a specific operation. An Industrial Discharge Permit shall not be reassigned or transferred or sold to a new owner, new Industrial User, different premises, or a new or changed operation without the prior written approval of the City. Any succeeding owner or Industrial User shall also comply with the terms and conditions of the existing permit until a new permit is issued.

H. Application for Permit Renewal

A Permittee with an expiring Industrial Discharge Permit shall apply for a new permit by submitting a complete permit application at least ninety (90) days prior to the expiration of the Permittee's existing discharge permit. The Permittee shall file a permit application on forms provided by the City containing the information specified in the application. A Permittee with an existing permit that has filed a complete and timely application may continue to discharge as approved by the City through an administrative extension of the existing permit.

I. Pretreatment and Monitoring Facilities

An industrial user shall provide necessary wastewater treatment, monitoring and/or equalization facilities as required to comply with Title 13, Chapter 12 of City Code and shall achieve compliance with all Pretreatment Standards and Requirements within the time limitations specified by EPA, the state, or the City, whichever is more stringent. Any facilities required to pretreat or monitor wastewater to a level acceptable to the Director shall be provided, operated and maintained at the industrial user's expense. Detailed plans showing the pretreatment facilities and operating procedures shall be submitted to the Director for review and shall be acceptable to the City before construction of the facility. The review of such plans and operating procedures will in no way relieve the industrial user from the responsibility of modifying the facility as necessary to produce an effluent acceptable to the City under the provisions of

this Chapter. Any subsequent changes in the pretreatment facilities or method of operation shall be reported to and be acceptable to the Director prior to the industrial user's initiation of the changes.

J. Prohibition of Bypass

1. For the purposes of this section:
 - a. Bypass means the intentional diversion of wastestreams from any portion of the Permittee's treatment facility.
 - b. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
2. Bypass not violating applicable Pretreatment Standards or Requirements. The Permittee may allow any bypass to occur which does not cause Pretreatment Standards or requirements to be violated, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of paragraphs 3. and 4. of this section but are reportable under Section 13.12.080.L.
3. Notice
 - a. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice to the Director, if possible, at least ten (10) days before the date of the bypass.
 - b. The Permittee shall submit oral notice of an unanticipated bypass that exceeds applicable Pretreatment Standards to the Director within twenty four (24) hours from the time the Permittee becomes aware of the bypass. A written submission shall also be provided within five (5) days of the time the Permittee becomes aware of the bypass. The written submission shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times, and, if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass. The Director may waive the written report on a case-by-case basis if the oral report has been received within twenty four (24) hours.
4. Prohibition of Bypass
 - a. Bypass is prohibited, and the Director may take enforcement action against the Permittee for a bypass, unless;
 - i. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
 - iii. The Permittee submitted notices as required under paragraph 3 of this Section.
 - b. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three (3) conditions listed in paragraph 4.a. of this Section.

K. Upset Provisions

1. For the purposes of this Section, Upset means an exceptional incident in which there is unintentional and temporary noncompliance with categorical Pretreatment Standards because of factors beyond the reasonable control of the Permittee. Upset does not include noncompliance to

the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. Effect of an upset

An Upset shall constitute an affirmative defense to an action brought for noncompliance with categorical Pretreatment Standards if the requirements of paragraph 3 are met.

3. Conditions necessary for a demonstration of upset A Permittee who wishes to establish the affirmative defense of Upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. An upset occurred and the Permittee can identify the cause(s) of the upset;
- b. The facility was at the time being operated in a prudent and workman-like manner and in compliance with applicable operation and maintenance procedures;
- c. The Permittee has submitted the following information to the Director within twenty-four (24) hours of becoming aware of the Upset (if this information is provided orally, a written submission must be provided within five (5) days):
 - i. A description of the Indirect Discharge and cause of noncompliance;
 - ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue;
 - iii. Steps being taken and/or planned to reduce, eliminate and prevent recurrence of the noncompliance.

4. Burden of proof

In any enforcement proceeding the Permittee seeking to establish the occurrence of an Upset shall have the burden of proof.

5. User responsibility in case of Upset

The Permittee shall control production of all discharges to the extent necessary to maintain compliance with Categorical Pretreatment Standards upon reduction, loss, or failure of its treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost or fails.

L. Compliance and Enforcement

1. Enforcement Response Plan

The City may adopt policies and procedures as set forth in the City's Enforcement Response Plan for carrying out the provisions of this permit, provided that such policies and procedures are not in conflict with this permit or any applicable state or federal law or regulation.

2. Publication of Industrial Users in Significant Noncompliance

The City shall publish annually, in a newspaper of general circulation that provides meaningful public notice within the jurisdictions served by the POTW, a list of the Significant Industrial Users which, at any time during the previous twelve (12) months, were in Significant Noncompliance as defined in Section 13.12.020 of City Code with applicable Pretreatment Standards and Requirements. In addition, any Industrial User found to be in Significant Noncompliance with paragraphs 3, 4, or 8 as shown in the definition of Significant Non-Compliance shall also be published in the newspaper.

3. Administrative Enforcement Actions

a. Notice of Violation (NOV)

When the City finds that an Industrial User has violated, or continues to violate, any provision of Title 13 Chapter 12 of City Code, an Industrial Discharge Permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, the City may serve upon the Industrial User a written Notice of Violation. Within five (5) working days of the receipt of such notice, an explanation of the violation and a plan for the satisfactory correction of prevention thereof, to include specific required actions, shall be submitted by the Industrial User to the City. The Industrial User may also request a meeting with

the Director to present further information and explanation. Submission of such a plan in no way relieves the Industrial User of liability for any violations occurring before or after receipt of the Notice of Violation. Nothing in this section shall limit the authority of the City to take any action, including emergency actions or any other enforcement action, without first issuing a Notice of Violation.

b. Suspension of Service

The City, through the Director of Public Works, may suspend water service and/or wastewater treatment service and/or revoke an Industrial Discharge Permit (Section 13.12.050, K. of City Code) when such revocation is necessary, in the opinion of the Director, in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons, to the environment, causes Pass Through or Interference or causes the City to violate any condition of its MPDES Permit.

Any person notified of a suspension of the water service and/or wastewater treatment service and/or the Industrial Discharge Permit shall immediately stop or eliminate the contribution. In the event of a failure of the person to comply voluntarily with the suspension order, the City shall take such steps as deemed necessary including immediate severance of the sewer connection, to prevent or minimize damage to the POTW system or endangerment to individuals or the environment. The City may reinstate the Industrial Discharge Permit, water service and/or the wastewater treatment service upon proof of the elimination of the non-complying discharge.

c. Administrative Compliance Order

When the City finds that an Industrial User has violated, or continues to violate, any provision of Title 13, Chapter 12 of City Code, an Industrial Discharge Permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, the City may issue an order to the Industrial User responsible for the discharge directing that the Industrial User come into compliance within a specific time. If the Industrial User does not come into compliance within the time provided, sewer service may be discontinued unless adequate treatment facilities, devices, or other related appurtenances are installed and properly operated. Compliance orders also may contain other requirements to address the noncompliance, including additional self-monitoring and management practices designed to minimize the amount of pollutants discharged to the sewer. A compliance order may not extend the deadline for compliance established for a Pretreatment Standard or Requirement, nor does a compliance order relieve the Industrial User of liability for any violation, including any continuing violation. Issuance of a compliance order shall not be a bar against, or a prerequisite for, taking any other action against the Industrial User.

d. Consent Orders

The City may enter into Consent Orders, assurances of compliance, or other similar documents establishing an agreement with any Industrial User responsible for noncompliance. Such documents shall include specific actions to be taken by the Industrial User to correct the noncompliance within a time period specified by the document. A consent order may include penalties, supplemental environmental projects, or other conditions and requirements as agreed to by the City and the Industrial User.

e. Show Cause Hearing

i. The City may order any Industrial User who causes or allows an unauthorized discharge to enter the POTW to show cause before an ad hoc committee appointed by the City Manager why the proposed enforcement action should not be taken. A notice shall be served on the Industrial User specifying the time and place of a hearing to be held by the ad hoc committee regarding the violation, the reasons why the proposed action is to be taken, and directing the Industrial User to show cause before the ad hoc committee why the proposed enforcement action should not be taken. The notice

of the hearing shall be served personally or be registered or certified mail (return receipt requested) at least ten (10) days before the hearing. Service may be made on any agent or officer of a corporation or other Authorized Representative of the Industrial User.

- ii. At any hearing held pursuant to Title 13, Chapter 12 of City Code, testimony taken must be under oath and recorded. The transcript of testimony will be made available to any member of the public and any party to the hearing upon payment of charges for the preparation thereof. The hearing may be suspended or continued at the discretion of the presiding officer, provided that all evidence is received and the hearing is closed within sixty (60) days after it is commenced.
- iii. After the ad hoc committee has reviewed the evidence, it shall issue an order to the Industrial User responsible for the discharge directing that, following a specified time period, the sewer service be discontinued unless adequate treatment facilities, devices or other related appurtenances shall have been installed or existing treatment facilities, devices or other related appurtenances are properly operated. Further orders and directives as are necessary and appropriate to correct the violation may be issued.

f. Administrative Fines

- i. When the City finds that an Industrial User has violated, or continues to violate, any provision of Title 13, Chapter 12 of City Code, an Industrial Discharge Permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, the City may fine such Industrial User in an amount not to exceed \$1,000 per day per violation. Such fines shall be assessed on a per-violation, per day basis. In the case of monthly or other long-term average discharge limits, fines shall be assessed for each day during the period of violation.
- ii. A lien against the Industrial User's property shall be sought for unpaid charges, fines, and penalties.
- iii. A Permittee desiring to appeal such fines must file a written request for the City to reconsider the fine along with full payment of the fine amount within fifteen (15) days of being notified of the fine. Such notice or appeal shall set forth the nature of the order or determination being appealed, the date of such order or determination, the reason for the appeal, and request a hearing pursuant to procedures outlined in Section 13.12.100, C.5 of City Code.
- iv. Issuance of an administrative fine shall not be a bar against, or prerequisite for, taking any other action against the Industrial User.

4. Judicial Enforcement Remedies

a. Injunctive Relief

When the City finds that an Industrial User has violated, or continues to violate, any provision of Title 13, Chapter 12 of City Code, an Industrial Discharge Permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, the City may petition the District Court for the issuance of a temporary or permanent injunction, as appropriate, which restrains or compels the specific performance of the Industrial Discharge Permit, order, or other requirement imposed by Title 13, Chapter 12 of City Code on activities of the Industrial User. The City may also seek such other action as is appropriate for legal and/or equitable relief, including a requirement for the Industrial User to conduct environmental remediation. A petition for injunctive relief shall not be a bar against, or a prerequisite for, taking any other action against an Industrial User.

b. Civil Penalties

- i. An Industrial User who has violated, or continues to violate, any provision of Title 13, Chapter 12 of City Code, an Industrial Discharge Permit, or order issued hereunder, or any other Pretreatment Standard or Requirement shall be liable to the City for a maximum civil penalty not to exceed \$1,000 per day per violation. In the

case of a monthly or other long-term average discharge limit, penalties shall accrue for each day during the period of violation.

- ii. The City may recover reasonable attorneys' fees, court costs, and other expenses associated with enforcement activities, including sampling and monitoring expenses, and the cost of any actual damages incurred by the City.
 - iii. In determining the amount of civil liability, the Court shall take into account all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained through the Industrial User's violation, corrective actions by the Industrial User, the compliance history of the Industrial User, and any other factor as justice requires.
 - iv. Actions for civil penalties shall be civil actions brought in the name of the City. The City must prove alleged violations by a preponderance of the evidence.
 - v. Filing a suit for civil penalties shall not be bar against, or a prerequisite for, taking any other action against an Industrial User.
- c. **Civil Fine Pass Through**
In the event that an Industrial User discharges such pollutants which cause the City to violate any condition of its MPDES permit and the City is fined by EPA or the State for such violation, then such Industrial User shall be fully liable for the total amount of the fine and/or supplemental environmental project that results from such action by EPA and/or the State.
- d. **Criminal Prosecution**
An Industrial User who purposely, knowingly or negligently violates any provision of this Chapter or willfully, negligently introduces any substance into the POTW which causes personal injury or property damage or knowingly makes any false statements, representations, or certifications in any application, record, report, plan, or other documentation filed or required to be maintained an Industrial Discharge Permit or order issued hereunder, or any other Pretreatment Standard or Requirement, shall upon conviction, be guilty of a misdemeanor, punishable by a fine not to exceed \$1,000 per day per violation and be subject to imprisonment for not more than six (6) months, or both. In addition, these penalties may be sought for any person who maliciously, willfully, or negligently breaks, destroys, uncovers, defaces, tampers with, or otherwise destroys, or who prevents access to, any structure, appurtenance or equipment, or any part to the POTW.

5. **Remedies Nonexclusive**

The remedies provided for in Title 13, Chapter 12 of City Code are not exclusive of any other remedies that the City may have under the provisions of Montana law. The City may take any, all, or any combination of these actions against a noncompliant Industrial User. Enforcement of pretreatment violations will generally be in accordance with the Enforcement Response Plan. However, the City may take other action against any Industrial User when the circumstances warrant and may take more than one enforcement action against any noncompliant Industrial User.

6. **Public Nuisance**

Any violation of Title 13, Chapter 12 of City Code, a wastewater discharge permit, or any order issued pursuant to Title 13, Chapter 12 of City Code, is hereby declared a public nuisance and may be corrected or abated by the Director or his designee. Any person creating such a public nuisance may be subject to the provisions of the Great Falls Municipal Code governing nuisances, including the provisions requiring reimbursement to the City for its costs of abatement. Action taken by the City to abate any nuisance shall not be a bar to criminal or other civil enforcement of City Code. The Director may initiate, on behalf of the City, an action in any court of competent jurisdiction concerning the abatement of any public nuisance created or caused by a

violation of Title 13, Chapter 12 of City Code. In any such action, the Director may request any legal or equitable relief, including injunctive relief and civil damages, as provided by applicable law.

M. Severability

The provisions of this Permit are severable. If any provision of this Permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit, shall not be affected thereby.

Part V Special Conditions

A. Sewer Meter Accuracy

The permittee has a flow meter (FC-09406) installed on the discharge line immediately prior to the discharge to the POTW. This flow meter is the compliance point for determining the daily discharge flow rate to the City. The Permittee shall annually determine the accuracy of the sewer flow meter. The results shall be forwarded to the City with the DMR for that month.

B. Spill Prevention, Control, and Countermeasure (SPCC) Plan including Slug Control and Stormwater Control

The Permittee shall provide updates to existing SPCC Plan. The SPCC will also include elements of a Slug Control Plan to minimize the potential for spills and slug discharges and elements of a Stormwater Control Plan to identify contaminated runoff which must be directed to the Permittee's pretreatment system and segregate as much noncontaminated stormwater from the refinery wastewater system as is practicable. The updated SPCC Plan shall be submitted to the City for approval within 90 days of the issuance of this permit. The SPCC Plan shall include, at a minimum, the following:

1. Detailed plans (schematics) showing facility layout and plumbing representative of operating procedures;
2. Description of contents and volumes of any process tanks;
3. Description of discharge practices, including non-routine batch discharges;
4. Listing of stored chemicals, including location and volumes;
5. Procedures for immediately notifying the City of any spill or Slug Discharge. It is the responsibility of the industrial user to comply with the following reporting requirements:
In the case of any discharge, including, but not limited to, spills, accidental discharges, discharges of a nonroutine, episodic nature, a noncustomary batch discharge, a slug discharge, a discharge containing unusual amounts of sulfur, or a discharge that may cause potential problems for the POTW, the industrial user shall immediately telephone and notify the City of the incident. This notification shall include:
 - a. Name of the facility.
 - b. Location of the facility.
 - c. Name of the caller.
 - d. Date and time of the discharge.
 - e. Date and time discharge was halted.
 - f. Location of the discharge.
 - g. Estimated volume of the discharge.
 - h. Estimated concentration of pollutants in the discharge.
 - i. Corrective actions taken to halt the discharge.
 - j. Method of disposal, if applicable.
6. Within five (5) days following such discharge, the industrial user shall submit a detailed written report describing the cause(s) of the discharge and the measures to be taken by the industrial user

to prevent similar future occurrences. Such notification shall not relieve the industrial user of any expense, loss, damage, or other liability which might be incurred as a result of damage to the POTW, natural resources, or any other damage to person or property; nor shall such notification relieve the industrial user of any fines, penalties, or other liability which may be imposed pursuant to this Chapter.

7. Procedures to prevent adverse impact from any accidental or Slug Discharge. Such procedures include, but are not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants, including solvents, measures to control discharges of sulfur, and/or measures and equipment for emergency response; and
8. Any other information as required by the City.
9. Notice to employees. A notice shall be permanently posted on the industrial user's bulletin board or other prominent place advising employees who to call in the event of an accidental or slug discharge. Employers shall ensure that all employees who work in any area where an accidental or slug discharge may occur or originate are advised of the emergency notification procedures
10. The plan shall be approved by the Director.
11. The control mechanisms (including postings, training, inspections, secondary containment structures and equipment) contained in The Slug Control Plan must be fully implemented and maintained at all times.
12. Failure of the plan to prevent violations of any provisions of the Permit in no way relieves the Permittee from its legal liability for noncompliance with the permit conditions.
13. Stormwater Control site maps shall include at a minimum, the following elements:
 - a. Site map of sufficient scale to clearly show current conditions.
 - b. Site boundaries for the facility
 - c. Map scale
 - d. North arrow.
 - e. Contour lines at 2-foot intervals
 - f. The location and extent of structures and impervious surfaces
 - g. Direction of stormwater flow (use arrows)
 - h. Locations of all existing structural stormwater control measures
 - i. Drainage Basin boundaries
 - j. Locations of all stormwater conveyances including ditches, stormwater collection system pipe network, and swales
 - k. Location of potential pollutant sources
 - l. Locations where spills and leaks have occurred
 - m. Locations of stormwater inlets and outfalls including Permittee's on-site "sewer boxes"
 - n. Locations and sources of run-on to your site: from adjacent properties that contains pollutants
 - o. Locations of the following activities where such activities are exposed to precipitation
 - p. Fueling stations
 - q. Vehicle and equipment maintenance and/or cleaning areas
 - r. Loading/unloading areas
 - s. Locations used for treatment, storage, or disposal of wastes
 - t. Location of storage tanks
 - u. . Processing and storage areas
 - v. Immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by products used or created by facility
 - w. Major permanent structures
 - x. Transfer areas for substances in bulk
 - y. Machinery

- z. An estimate of the volume of stormwater generated by each of the Drainage Basins outlined in the Site Plan.
- aa. Description of each basin in terms of pollution potential.
- bb. Summary of Potential Pollution Sources

The Permittee shall document areas at the facility where industrial materials or activities are exposed to stormwater. Industrial materials or activities include, but are not limited to, material handling equipment or activities; industrial machinery; raw materials, industrial production and processes; and intermediate products, by products, final product or waste product. For each area identified the description must include:

- i. A list of the industrial activities exposed to stormwater { e.g. material storage, equipment fueling, maintenance and cleaning).
- ii. A list of the pollutant(s) or pollutant constituents associated with each activity.
- iii. The pollutant list must include materials that have been handled, treated, stored or disposed and that have been exposed to stormwater in the past three years.
- iv. Permittee must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges.
- v. Permittee shall document spills and leaks of oil or toxic or hazardous pollutants in reportable quantities that occurred at exposed areas in the past three years.
- vi. During year two of the permit term, the Permittee shall assess the options in the design assessment.

C. Continuous pH Monitoring

1. The permittee shall continuously monitor pH through a continuous pH monitoring probe and a pH transmitter shall be tied into the Plant Distributed Control System (DCS).
2. When pH is out of the permitted range, the continuous monitoring system shall automatically shut down the discharge to the POTW. Discharge to the POTW shall not be restarted until pH is within the permitted limits.
3. When the continuous pH monitoring system is inoperable due to calibration, routine maintenance or malfunction, the Permittee shall analyze a grab sample for pH once an hour at Monitoring Point 001.
4. The Permittee shall operate the continuous pH monitoring system in compliance with EPA Method 150.2 including meter calibration.
5. All Calibration records shall be recorded in a numbered and bound laboratory notebook.
6. When the continuous pH meter records a pH of 6.0 standard units or lower or a reading of 9.0 standard units or higher, an additional pH grab sample shall be taken within 15 minutes.
7. Continuous pH monitoring is for compliance with pH limits. Grab sample pH monitoring is for process control only.

D. Pretreatment Requirements and Best Management Practices

1. The permittee shall operate and maintain, in good working order the pretreatment system, associated chemical feed systems, pumps, and control systems.
2. The permittee shall continuously monitor pH as described in Part V, C. Continuous pH Monitoring
3. If modifications to the pretreatment system, including but not limited to, modifications to the existing process and/or use of chemicals, the Permittee shall inform the City in writing thirty (30) days prior to modifications.

E. Compliance Schedule

1. Within 90 days of the effective date of the permit, submit an updated Spill Prevention, Control, and Countermeasure Plan and install hydrogen sulfide (H₂S) gas and temperature meters at Outfall 001.
2. Within 365 days of the effective date of the permit, provide notification no later than 30 days after taking B/Y DAF out of service. Submit updated Pretreatment system process flow diagram.

Part VI - Definitions and Abbreviations**A. Definitions.**

Terms not specifically defined here shall have the meaning set forth in City Code or 40 C.F.R. Part 403.3. Unless the context specifically indicates otherwise, the meaning of terms used in this Permit shall be as follows:

"**Act**" or "**the Act**" means The Federal Water Pollution Control Act, also known as the Clean Water Act (33 U.S.C. 1251 et seq.), as amended.

"**Approval Authority**" means The State Director in an NPDES state with an approved State Pretreatment Program or the Regional Administrator of the EPA in a non-NPDES state or NPDES state without an Approved State Pretreatment Program.

"**Authorized Representative of the Industrial User**" means

1. If the Industrial User is a corporation:
 - a. The 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
 - b. The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for Industrial Discharge Permit requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
2. If the Industrial User is a partnership or sole proprietorship: a general partner or proprietor, respectively.
3. If the Industrial User is a federal, state, or local governmental facility: a city or highest official appointed or designated to oversee the operation and performance of the activities of the government facility, or their designee.
4. The individuals described in subsections 1 through 3 above, may designate another authorized representative if the authorization is made in writing, the authorization specifies the individual or a position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the company, and the written authorization is submitted to the City.

"**Best Management Practice**" (BMP) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in Section 13.12.030 of City Code. BMPs are Pretreatment Standards. BMPs may include, but are not limited to, treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

"Biochemical oxygen demand (BOD)" means the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at twenty (20) degrees Celsius, expressed in milligrams per liter.

"Bypass" means the intentional diversion of waste streams from any portion of an Industrial User's treatment facility pursuant to Section 13.12.110.C of City Code.

"Categorical Pretreatment Standard" or **"Categorical Standard"** means any regulation containing pollutant discharge limits promulgated by EPA in accordance with sections 307(b) and (c) or the Act (33 U.S.C. Section 1317) that apply to a specific category of Industrial Users and that appear in 40 CFR chapter I, subchapter N, Parts 405-471.

"Composite sample" means a representative flow-proportioned sample generally collected within a twenty-four (24) hour period and combined according to flow. Time-proportional sampling may be approved or used by the City where time-proportional samples are believed representative of the discharge.

"Control Authority" means the City of Great Falls.

"Cooling water" means the water discharged from any use such as air conditioning, cooling or refrigeration, or to which the only pollutant added is heat.

"Daily Maximum" (Daily Max) is the maximum value allowable in any single sample or instantaneous measurement.

"Director" means the Director of Public Works, City of Great Falls or their duly authorized representative.

"Domestic (sanitary) wastes" means liquid wastes: 1. from the non-commercial preparation, cooking, and handling of food, or 2. containing only human excrement and similar matter from the sanitary conveniences of dwellings, commercial buildings, industrial facilities, and institutions.

"Environmental Protection Agency" or **"EPA"** means the U. S. Environmental Protection Agency, or where appropriate the term may also be used as a designation for the Administrator or other duly authorized official of said agency.

"Existing Source" means an Industrial User which is in operation at the time of promulgation of Categorical Pretreatment Standards and any Industrial User not included in the definition of "New Source".

"Fats, Oil and Grease" or **"FOG"** means non-petroleum organic polar compounds derived from animal or plant sources such as fats, non-hydrocarbons, fatty acids, soaps, waxes, and oils that contain multiple carbon chain triglyceride molecules. These substances are detectable and measurable using analytical procedures established in the 40 CFR Part 136.

"Grab sample" means a sample which is taken from a waste stream on a one-time basis with no regard to the flow and over a period of time not to exceed fifteen (15) minutes.

"Hauled wastes" means any sewage or wastewater contained in a tank or similar apparatus and which is transportable by vehicle, rail car or other mode.

"Indirect discharge" means the discharge or the introduction of pollutants into the POTW from a non-domestic source regulated under Section 307(b), (c) or (d) of the Act (including hauled wastes).

"Industrial" means of, or pertaining to, industry, manufacturing, commerce, trade, or business as distinguished from domestic or residential.

"Industrial Discharge Permit" means the document or documents issued to an Industrial User by the City in accordance with the terms of City Code that allows, limits and/or prohibits the discharge of pollutants or flow to the POTW as set forth in Section 13.12.050 of City Code.

"Industrial User" means a source of Indirect Discharge.

"Industrial wastes" or **"non-domestic wastes"** mean the liquid or solid wastes from industrial manufacturing processes, trade, or business activities producing non-domestic or non-residential sewage as distinct from domestic wastewater.

"Instantaneous limit" means the maximum concentration of a pollutant or measurement of a pollutant property allowed to be discharged at any time. For pollutants, compliance is typically determined by use of a grab sample.

“**Interference**” means a discharge, which alone or in conjunction with a discharge or discharges from other sources, both:

1. Inhibits or disrupts the POTW, its treatment processes or operations or its sludge processes, use or disposal; and
2. Therefore, is a cause of violation of any requirement of the POTW's Montana Pollutant Discharge Elimination System (MPDES) permit or of the prevention of sewage sludge use or disposal in compliance with any of the following statutory/regulatory provisions or permits issued hereunder, or any more stringent state or local regulations: Section 405 of the Act; the Solid Waste Disposal Act, including Title II commonly referred to as the Resource Conservation and Recovery Act (RCRA); any state regulations contained in any state sludge management plan prepared pursuant to Subtitle D of the Solid Waste Disposal Act; the Clean Air Act; the Toxic Substances Control Act; and the Marine Protection, Research, and Sanctuaries Act.

“**Local limit**” means specific discharge limits and BMPs developed, applied, and enforced upon Industrial Users to implement the general and specific discharge prohibitions listed in Section 13.12.030 of City Code. Local limits are Pretreatment Standards.

“**New Source**” means:

1. Any building, structure, facility or installation from which there is or may be a Discharge of pollutants, the construction of which commenced after the publication of proposed Pretreatment Standards under section 307(c) of the Act which will be applicable to such source if such Standards are thereafter promulgated in accordance with that section, provided that:
 - a. The building, structure, facility or installation is constructed at a site at which no other source is located; or
 - b. The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an Existing Source; or
 - c. The production or wastewater generating processes of the building, structure, facility or installation are substantially independent of an Existing Source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the Existing Source should be considered.
2. Construction on a site at which an Existing Source is located results in a modification rather than a New Source if the construction does not create a new building, structure, facility or installation meeting the criteria of paragraphs 1.b. or 1.c. of this section, but otherwise alters, replaces, or adds to existing process or production equipment.
3. Construction of a New Source as defined under this paragraph has commenced if the owner or operator has:
 - a. Begun, or caused to begin as part of a continuous onsite construction program:
 - i. Any placement, assembly, or installation of facilities or equipment; or
 - ii. Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of New Source facilities or equipment; or
 - b. Entered into a binding contractual obligation for the purchase of facilities or equipment which is intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

“**Normal domestic strength wastewater**” means wastewater, when analyzed in accordance with procedures established by the EPA pursuant to 40 CFR Part 136, as amended, contains no more than two-hundred (200) mg/L of BOD and/or two-hundred and fifty (250) mg/L of TSS. Discharges that exceed the level of BOD and TSS are subject to charges for extra strength wastewater charges pursuant to Section 13.18.060 of City Code in addition to any Pretreatment Standards and Requirements established in City Code.

“Non-contact cooling water” means cooling water that does not come into direct contact with any raw material, intermediate product, waste product, or finished product.

“Non-Significant Industrial User” means any Industrial User which does not meet the definition of a Significant Industrial User, but is otherwise required by the City through permit, order or notice to comply with specific provisions of City Code and is so notified by the City.

"Pass Through" means a discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the City’s Montana Pollutant Discharge Elimination System (MPDES) Permit (including an increase in the magnitude or duration of a violation).

"Person" means any individual, firm, company, association, society, corporation or group.

“pH” means the logarithm (base 10) of the reciprocal of the hydrogen ion concentration expressed in moles per liter of solution and reported as Standard Units (SU).

"Pollutant" means any dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, explosives, munitions, medical waste, chemical wastes, corrosive substance, biological material, biological nutrient, toxic substance, radioactive material, heat, malodorous substance, wrecked or discharged equipment, rock, sand, slurry, cellar dirt, untreatable waste, or industrial, domestic, or agricultural wastes and certain characteristics of wastewater (e.g., pH, temperature, TSS, turbidity, color, BOD, COD, toxicity, or odor) discharged into or with water.

“POTW treatment plant” means that portion of the POTW designed to provide treatment to wastewater.

"Pretreatment" or **“treatment”** means the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature or properties of pollutants in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. The reduction or alteration can be obtained by physical, chemical or biological processes, or process changes other means, except as prohibited by 40 CFR Section 403.6(d).

“Pretreatment Requirement” means any substantive or procedural requirement related to Pretreatment, other than a Pretreatment Standard imposed on a Industrial User.

“Pretreatment Standard”, “National Pretreatment Standard” or **“Standard”** means any regulation containing pollutant discharge limits promulgated by the EPA in accordance with section 307 (b) and (c) of the Act, which applies to Industrial Users. This term includes prohibitive discharge limits established pursuant to Section 13.12.030 and includes the Specific Prohibitions, local limits and Best Management Practices that are or may be established by the City. In cases of differing Standards or regulations, the more stringent shall apply.

“Publicly Owned Treatment Works” or **“POTW”** means a treatment works as defined by Section 212 of the Act (33 U.S.C. 1292), which is owned in this instance by the City. This definition includes any sewers that convey wastewater to the POTW treatment plant, but does not include pipes, sewers or other conveyances not connected to a facility providing treatment. For the purposes of Title 13, Chapter 12 of the Official Code of the City of Great Falls, "POTW" shall also include any sewers that convey wastewaters to the POTW from persons outside the City who are by contract or agreement with the City, users of the City's POTW.

“Sector control program” means a program to control specific pollutants from Industrial Users with similar waste generation or treatment through the implementation of Pretreatment Standards and Requirements, including Best Management Practices. These sector control program requirements may be found at Section 13.12.090 of City Code.

"Significant Industrial User" is any Industrial User which:

1. Is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR chapter I, subchapter N; or
2. Discharges an average of twenty-five thousand gallons per day or more of process wastewater to the POTW (excluding sanitary, non-contact cooling and boiler blow down wastewater); or
3. Contributes a process waste stream which makes up five percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or

4. Has reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standard or Requirement.

“**Significant Noncompliance**” applies to a Significant Industrial User (or any Industrial User which violates paragraphs 3, 4, or 8) if its violation meets one or more of the following criteria:

1. Chronic violations of wastewater discharge limits, defined here as those in which sixty-six (66) percent or more of all of the measurements taken during a six-month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including instantaneous limits.
2. Technical Review Criteria (TRC) violations, defined here as those in which thirty-three (33) percent or more of all of the measurements for each pollutant parameter taken during a six-month period equal or exceed the product of the numeric Pretreatment Standard or Requirement including instantaneous limits multiplied by the applicable TRC (TRC = 1.4 for BOD, TSS, fats, oil, and grease, and 1.2 for all other pollutants except pH).
3. Any other violation of a Pretreatment Standard or Requirement (daily maximum, long-term average, instantaneous limit, or narrative Standard) that the POTW determines has caused, alone or in combination with other discharges, Interference or Pass Through (including endangering the health of POTW personnel or the general public).
4. Any discharge of a pollutant that has caused imminent endangerment to human health, welfare, or the environment or has resulted in the POTW's exercise of its emergency authority to halt or prevent such a discharge.
5. Failure to meet, within ninety (90) days after the schedule date a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance.
6. Failure to provide, within thirty (30) days after the due date, required reports such as baseline monitoring reports, compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules.
7. Failure to accurately report noncompliance.
8. Any other violation or group of violations, which may include a violation of Best Management Practices, which the POTW determines will adversely affect the operation or implementation of the local pretreatment program.

“**Slug discharge**” means a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch Discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate Title 13, Chapter 12 of City Code, including a discharge which exceeds the hydraulic or design of an Industrial User's treatment system or any part of the treatment unit.

“**Total Suspended Solids**” or “**TSS**” means the total suspended matter, expressed in milligrams per liter, that either floats on the surface of, or is in suspension in, water, wastewater, or other liquids, and that is removable by laboratory filtering in accordance with procedures approved in 40 CFR Part 136.

“**Toxic pollutants**” includes but is not limited to any pollutant or combination of pollutants listed as toxic in regulations promulgated by the Administrator of the EPA under the provisions of Section 307(a) of the Act (33 U.S.C. §1317(a)) or as otherwise listed at 40 CFR Part 122, Appendix D.

“**Upset**” means an exceptional incident in which a treatment works is unintentionally and temporarily in a state of noncompliance with Categorical Pretreatment Standards pursuant to Section 13.12.110.B.

Any other term not herein defined shall be defined as presented in the "Glossary -- Water and Sewage Control Engineering," A.P.H.A., A.S.C.E. and W.P.C.F., latest edition or 40 CFR Part 403.

B. Abbreviations

ASTM	American Society Testing Materials
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
°C	degrees Celsius
CFR	Code of Federal Regulations

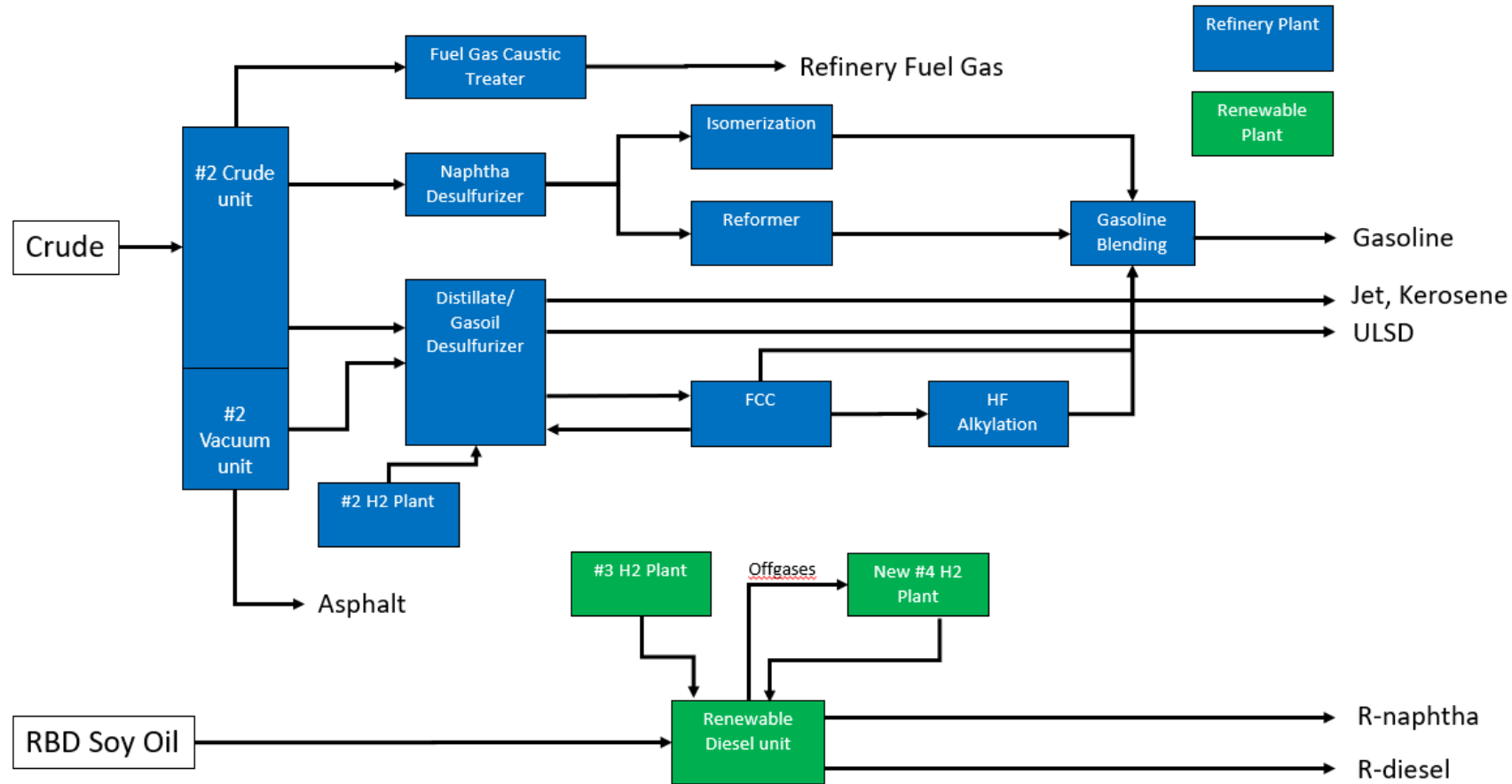
CWA	Clean Water Act
EPA	Environmental Protection Agency
FOG	Fats, Oils and Grease
mg/L	milligrams per Liter
MPDES	Montana Pollutant Discharge Elimination System
O&M	Operation and Maintenance
POTW	Publicly Owned Treatment Works
SIC	Standard Industrial Classification
SIU	Significant Industrial User
SNC	Significant Noncompliance
USC	United States Code
TSS	Total Suspended Solids
WPCF	Water Pollution Control Federation

Attachment 1

Block Flow Diagram

Attachment F-2: Block Flow Diagram

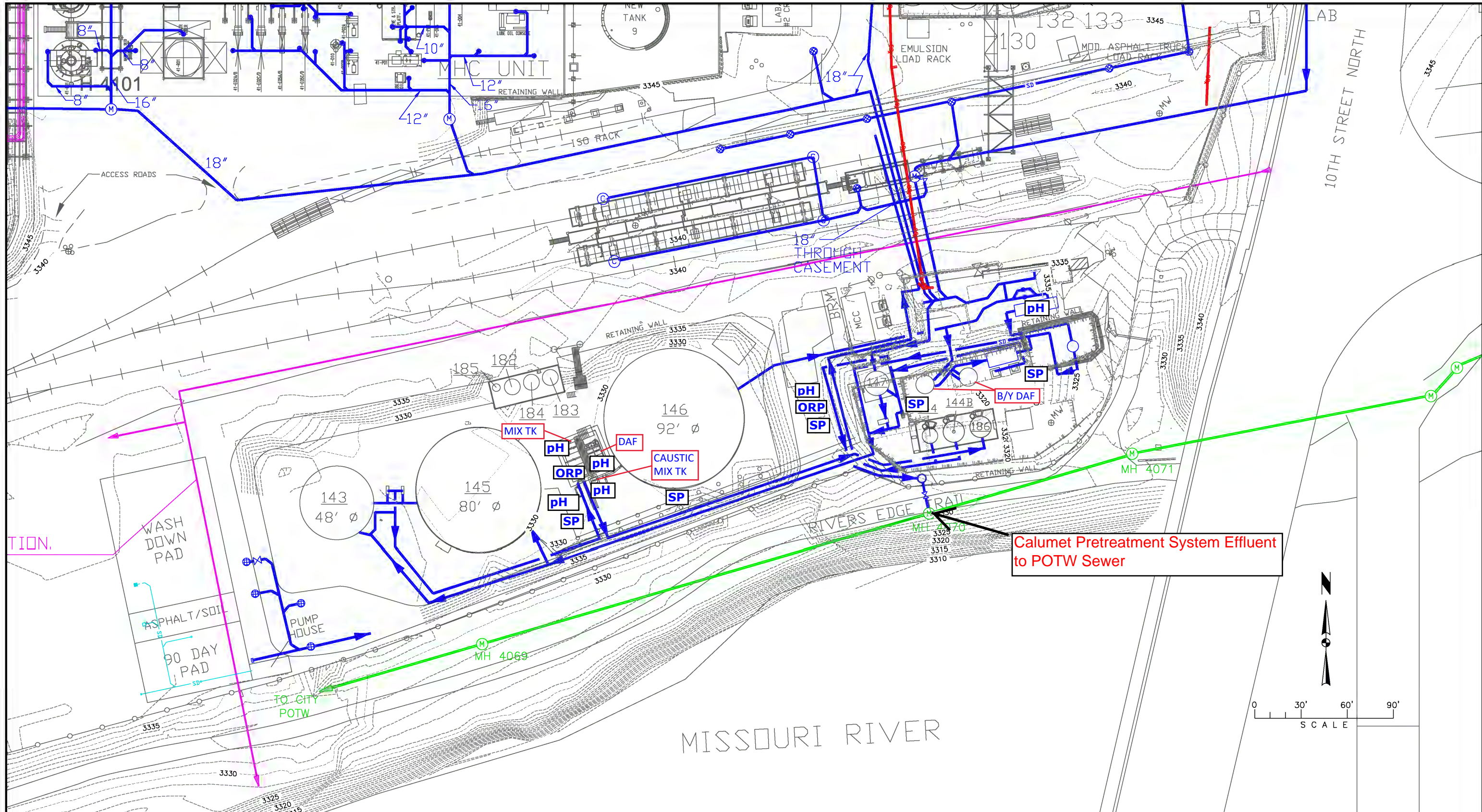
Dual Train Configuration



Attachment 2

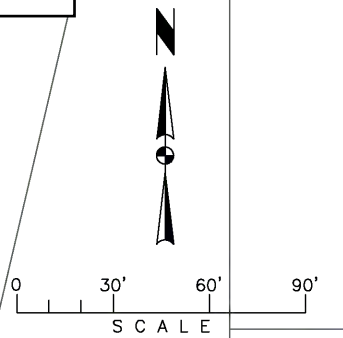
Pretreatment Plan and Process Flow Diagram

J:\CALUMET REFINING COMPANY\WWTP PLOT.dwg, 9/5/2018 2:53:32 PM, CDF



SP - Sampling Point (Operational Control)
 ORP - Oxidation Reduction Potential (Process Control)
 pH - pH Monitoring (Process Control)

Calumet Pretreatment System Effluent to POTW Sewer



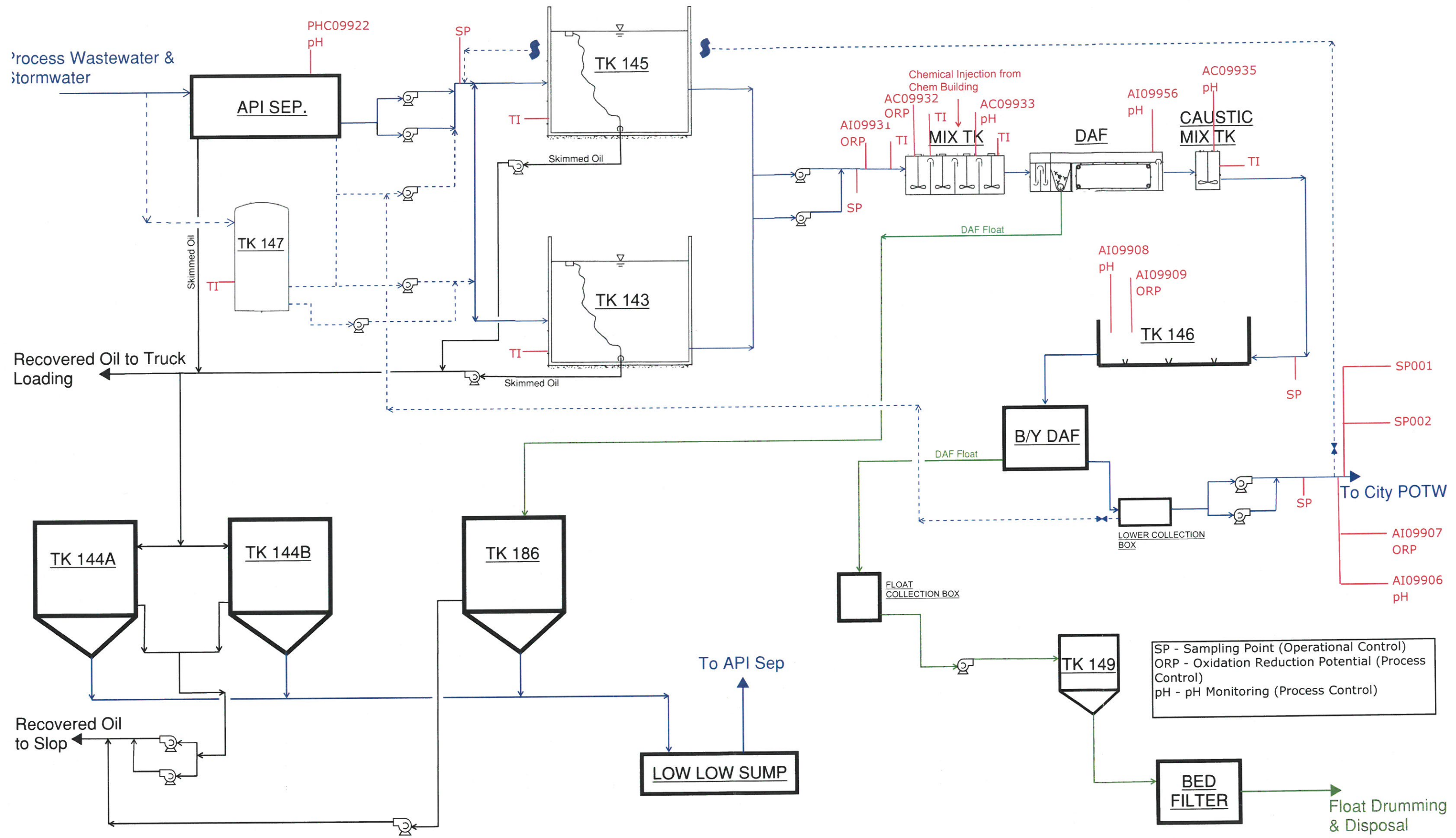
ATTACHMENT D - WASTEWATER PRETREATMENT SYSTEM SCHEMATIC DIAGRAM



REV	REVISION	BY	CHK	APP	DATE	REV	REVISION	BY	CHK	APP	DATE	REV	REVISION	BY	CHK	APP	DATE



DWG TITLE:		CALUMET MONTANA REFINING															
		WWTP PLAN															
Scale:	Design:	Drawn:	Date:	Checked By:	Dwg #	Rev.											
NOTED	JPJ	CDF	09/05/2018	---	FIG: 1												



ATTACHMENT D-2 - CALUMET MONTANA REFINING WWTP BLOCK FLOW DIAGRAM