



Industrial User Facility Inspection Report U.S. EPA, Region 8

Name of industry and location:

Sinclair Casper Refinery Company.
5700 East Hwy 20/26
Casper, WY 82609

Control Authority / NPDES Permit No.

City of Casper
NPDES Permit No. WY-0021920

IU – NPDES ID

WYPU00002

Date of visit:

July 18, 2023

Approximate Time of visit:

1030 - 1130

Name(s) / Affiliation / email of inspector(s):U.S. EPA:

Al Garcia, garcia.al@epa.gov

City of Casper:

Randy Ogden, rogden@casperwy.gov

General Facility Information:Representatives at Inspection:

- Erik Roylance – EHS Coordinator, Erik.roylance@hfssinclair.com
- Stewart Griner – EHS Supervisor
- Brady Wilkinson – Operations Supervisor
- Bruce Sowers – EHS Manager

Type of Business Operations:

- Crude Oil Refinery

Facility Information:

- About 150 employees
- three 8-hour shifts
- Days of Operation: seven days per week

Inspection Description:

Al Garcia from the U.S. Environmental Protection Agency (EPA) and Randy Ogden from the City of Casper conducted an oversight significant industrial user (SIU) inspection of the Sinclair Casper Refinery Company (the facility) in Casper, WY. The SIU inspection was conducted as part of the EPA Pretreatment audit of the City of Casper's Publicly Owned Treatment Works (POTW) Pretreatment Program and is intended to provide a general overview of the facility to ensure the Pretreatment records reviewed by EPA adequately address current conditions at the facility. The EPA oversight SIU inspection consisted of an evaluation of the wastestreams generated from the unit operations and processes at the facility, including potential for spills and slug discharges. The facility discharges to the sewer collection system leading to the City of Casper's POTW.

Upon arriving at the facility on July 18, 2023 at approximately 10:30 a.m., Al Garcia of the EPA presented

credentials to the facility representatives and explained the purpose of the inspection. During the opening interview, the facility representatives provided an overview of the operations and processes at the facility, as well as information regarding wastestreams generated from these unit operations and management of these wastestreams. The opening interview was followed by a facility tour to visually inspect the unit operations. The EPA conducted a closing conference to discuss potential findings and recommendations identified during the inspection.

Process Description:

The Sinclair Casper Refinery Company is a crude oil refinery that primarily produces gasoline and diesel fuel products. The facility has the capacity to process 30,000 barrels per day. The refinery is supplied by a pipeline from the Powder River Basin and sources in CO, ND and Canada. The refinery uses the following processes to produce the fuel products:

- Desalting – remove salt and water from the crude oil.
- Crude fractionation unit – produces fuel components such as naptha, gasoil, kerosene/diesel, butane for product storage or for further processing.
- Fluidized Catalyzed Cracking unit – further processing of gasoil.
- Reformer Unit – produce higher octane gasoline and hydrogen.
- Catalytic hydro-desulfurization unit – remove sulfur from the product stream.
- Hydrotreater – remove H₂S.
- Sulfur Recovery unit (SRU)– converts SO₂ into elemental sulfur for incineration in the tail gas treatment unit (TGTU).

The sour wastestreams generated from these refinery unit operations are processed in the sour water stripper. The H₂S and NH₃ removed from the stripper is sent to the SRU. The refinery wastestreams are collected in the oily water sewer system. The oily water sewer system is treated in an API oil/water separator and then an aggressive biological treatment unit (ABTU). The solids from the waste treatment units are collected, sent to induced air floatation units and are sent to batch tanks for reprocessing. The effluent from the ABTU is discharged to evaporated unlined ponds located on the refinery property. The refinery process wastewaters described above are not discharged to the City.

The SRU receives the foul gases removed from the stripping units. The SRU is a scrubber oxidation tower composed of structural packing to promote the removal of foul gases. The bottom of the tower contains a volume of liquid that is slightly caustic to neutralize the acidic nature of the foul gases. The liquid is recirculated from the bottom containment to the top of the tower and trickled down the structural packing to come into contact with the gases and converts the foul gas to elemental sulfur. The elemental sulfur is then removed and incinerated in the TGTU. The caustic supply is contained in a 2,000-barrel tank and is injected based on automatic pH control in the tower. The liquid in the tower is continuously pH monitored and alarms are established based on pH setpoints of 6 to 9 std units. The spent scrubber liquid is blown down and discharged to the City.

EPA Classification of the Industrial User

Although the facility performs unit operations subject to the Petroleum Refining Categorical Pretreatment Standards found in 40 C.F.R. Part 419, the facility does not discharge these regulated wastewaters to the City. The discharge is generated from continuous blow down from the SRU. The City has determined that this wastestream is subject to its local limits and has permitted the facility as an SIU, subject to the Pretreatment Regulation found in the City's ordinance and 40 C.F.R. Part 403.

Summary of Findings

Sinclair Casper Refinery Company

NPDES ID# WYPU00002

July 18, 2023

Pretreatment Inspection Findings	Follow up Action Items
Based on information gathered during the inspection, it appears that the facility samples the permitted wastewater over an 8-hour time period and the City samples the permitted wastewater over a 24-hour time period. 40 CFR 403.12(g)(3) of the Pretreatment Regulations require that the required reports must be based upon data obtained through appropriate sampling and analysis performed during the period covered by the report, and that data are representative of conditions occurring during the reporting period.	<u>Pretreatment Requirement</u> 40 CFR 403.12(g)(3) <u>Corrective Actions</u> The City needs to determine the sampling method that is representative and ensure the facility is providing representative sampling. EPA recommends the facility develop a sampling plan to document its discharge practices and sampling methods of the discharge to ensure these are consistent and meet the monitoring requirements of the Pretreatment permit.

Report Review and Signature		
Drafter Name	Address/Phone Number	Date
Al Garcia	U.S. EPA Region 8 1595 Wynkoop Street 8WD-CWW Denver, Colorado 80202 303-312-6382	07/25/2023
Reviewer Name	Address/Phone Number	Date
Stephanie Passarelli	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202 303-312-6803	07/28/2023
Supervisor Signature/Name	Address/Phone Number	Date
Michael Boeglin	U.S. EPA Region 8 1595 Wynkoop Street 8WD-CWW Denver, Colorado 80202 303-312-6250	08/4/2023