

NPDES Inspection Report – Water Treatment Plant

National Database Information	
Inspection Date: July 20, 2022	Inspection Type: Water Treatment Plant
Entry/Exit Time: 11:00 / 13:00	NPDES ID Number: MTDW0003I
NAICS Code: 221310	Inspection ID: 202207 MTDW0003I
Lead inspector and affiliation: Lisa-kay Prideaux / EPA Region 8 Montana Operations Office	

Facility Location Information	
Site/Facility Name & Location: Stu Miller Water Plant 250 Highway 49 Browning, Montana 59417 48.467728°N; -113.238297°W	Email Report to: Alvin Yellow Owl Jr., Manager Two Medicine Water Company (b) (6)

Contact Information	
	Name(s)/Title
Facility Contacts:	Gerald Bechel / Water Plant Operator / Two Medicine Water Company / present during the inspection
Person/Company meeting definition of “Operator”	Two Medicine Water Company
Authorized Official	Alvin Yellow Owl Jr. / Manager / Two Medicine Water Company

Permit Information	
Is the permit on site and available? yes	
Effective Date: December 9, 2020	Expiration Date: June 30, 2024
Latitude: 48.467725° N	Longitude: -113.238503° W
Receiving Water(s): Two Medicine River	
Regulatory Inspector’s source of information: Permit, Statement of basis, previous inspection, Integrated Compliance Information Systems (ICIS), Enforcement & Compliance History Online (ECHO), facility representatives and field observations.	

Areas Evaluated During Inspection		
<u>Permit</u>	<u>Self-Monitoring Program</u>	Pretreatment
<u>Records</u>	Compliance Schedule	Pollution Prevention
<u>Facility Site Review</u>	<u>Laboratory</u>	Stormwater
<u>Effluent/Receiving Waters</u>	<u>Operations and Maintenance</u>	Combined Sewer Overflow
Flow Measurement	Sludge Handling/Disposal	Sanitary Sewer Overflow

Report Review and Signature		
Drafter Name	Address/Phone Number	Date
 Digitally signed by Prideaux, Lisa-kay Prideaux Date: 2022.09.19 10:42:31 -06'00'	U.S. EPA Region 8, Montana Operations Office 10 West 15th Street, Suite 3200 Helena, Montana 59626 406-457-5022	09.13.2022
Reviewer Name	Address/Phone Number	Date
Emilio Llamozas	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202 303-312-6407	09/14/2022
Management Signature/Name	Address/Phone Number	Date
 Digitally signed by Boeglin, Michael Date: 2022.09.19 06:57:23 -06'00'	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202 303-312-6362	09/19/2022
Michael Boeglin		

Inspection Narrative and Site Description

The inspection was conducted at the Stu Miller Water Treatment Plant (facility) located on the Blackfeet Reservation, in East Glacier, Montana to evaluate compliance with its National Pollutant Discharge Elimination System (NPDES) general permit associated with drinking water production (general permit). The EPA issued a NPDES permit to the facility, effective on December 9, 2020.

On July 20, 2022, I, EPA inspector Lisa-kay Prideaux, conducted an announced inspection at the facility. The inspection commenced at approximately 11:00, when I arrived at the facility. After arriving at the facility, I presented my inspector credentials to Gerald Bechel, water plant operator, and had an opening conference to explain the purpose of the inspection. I asked a series of questions of the facility representative to help evaluate the facility operations and compliance. Throughout the inspection, observations and photograph descriptions were documented in a field logbook. All photographs taken during the inspection are included in the attached photo log.

The Stu Miller Water Treatment Plant is owned by the Blackfeet Tribe and is operated by Two Medicine Water Company. The treatment plant was constructed in 2005 and became operational in 2012. The facility provides drinking water for the residences and businesses of East Glacier Park Village (352 year-round population) and the Town of Browning (1,018 population).

The facility has one raw water intake from Two Medicine Lake, located approximately four miles northwest of the facility, and draws up to 1,500 gallons per minute (gpm) through four (4) pumps. As the raw water enters the facility, it is pretreated by screening particles greater than 0.5 millimeters (mm). No chemicals are used in the pretreatment process. Debris collected on the screens are removed by back pulsing and are discharged to the wastewater treatment ponds. Back pulsing occurs approximately every thirty minutes. Pretreated water then moves to a microfiltration process for treatment. The microfiltration process uses loose, hollow fibers assembled into modules. During treatment, a vacuum is applied to the inside of the fibers. Water flows from the outside of the fibers to the inside creating filtered or treated water. Following filtration, the water is sent to a 100,000-gallon clear well tank where it is chlorinated prior to distribution. The accumulation of undesired particulates on the outside of the fibers is controlled through three processes. A recovery clean occurs automatically when the fiber pressure reaches 95%. The recovery clean process includes hitting the fibers with air to scour solids from the surface, a quick drain of about half of the tank (to the wastewater treatment ponds), and then the tank fills and automatically starts filtration again. A periodic cleaning is performed once each morning where a 12% solution of chlorine is used to backwash the fibers, this process takes approximately 30-45 minutes to cycle. The backwash is drained to the wastewater treatment ponds. Maintenance cleaning occurs monthly with 12% chlorine solution and every two months with a 50 % critic acid solution; these processes can take 6-8 hours to complete. At the end of these cleaning processes, the cleaning solutions are neutralized and then drained to the wastewater treatment ponds. Sodium bisulfate and sodium hydroxide are used for neutralization. Neutralization is considered complete when the pH of the wastewater is between 6.0 and 9.0, and the chlorine concentration is less than 0.01 mg/L. All backwash and neutralized chemicals are discharged to the wastewater ponds.

The wastewater treatment ponds consist of two (2) settling ponds located north of the facility. The ponds operate in series, have a total surface area of 0.642 acres, and have a capacity of approximately 1.1 million gallons. Between the treatment ponds is a stair flume where water drops approximately 25 feet to introduce aeration and help with volatilization of any residual chlorine. Discharge is in the northwest corner of pond 2 and flows underground to an outfall housing structure. Effluent samples are collected within this structure; however, there is no effluent flow measuring device. The facility is permitted as a continuous discharger to the Two Medicine River.

After a brief background and facility overview, I requested to review records (July through December 2021) which included a copy of the general permit, authorization letter, monitoring records (sample collection logs, raw data bench sheets for in-house analysis, laboratory reports, chain of custody forms, discharge monitoring reports (DMR), and calibration records), facility operating records (operations and maintenance manuals, standard operating procedures, equipment maintenance records, Material Safety Data Sheets (MSDS) (for on-site

chemicals)), and permit required compliance schedules (24-hour noncompliance records, weekly inspections, and operations and maintenance program required records).

After the facility representative interviews, Mr. Bechel and I walked through the water treatment process and wastewater treatment ponds. We started with the water treatment process where Mr. Bechel indicated the water intake pipes, microfiltration units (photo 587), and clear well. I also observed the piping and troughs for the transfer of wastewater from the filter backwash, and clean in place washes. We then went outside to observe the wastewater treatment ponds (photos 588-590), outfall housing structure (photo 591), sampling location (photo 592), and Outfall 001 discharge pipe. At the time of the inspection, pond 2 (the north pond) had a significant amount of cattail growth on all edges and growing within the pond (see photo 590); Mr. Bechel indicated he has been working to remove the cattails from the pond.

A closing conference was held on-site with Mr. Bechel, during which I discussed preliminary findings, as well as the process for the inspection report. The inspection concluded at approximately 13:00 pm. On July 29, 2022, the EPA sent an email to Mr. Yellow Owl and Mr. Bechel with the preliminary findings from the inspection.

Findings, Corrective Actions and Recommendations

Finding #1: Buffer solutions for pH calibration were expired.

Specifically, the facility monitors pH on a weekly basis. The facility uses a pH UltraPen for monitoring and calibrates the meter prior to each use. In review of the pH buffer standards, it was noted that the pH buffer solution 10 expired in April 2022.

Regulatory requirement:

Part 3.1 and Table 3 of the general permit indicates the sample type and monitoring frequency.

Part 4 of the general permit requires monitoring to be conducted according to test procedures approved under 40 C.F.R. Part 136 (Part 4.2), and retaining records of all monitoring information, including calibration records (Part 4.6).

40 C.F.R. Part 136 lists test procedures and sample collection requirements. Standard method procedures for pH include calibrating the pH probe with buffer solutions.

Corrective Action:

Ensure buffer solutions used in the calibration of all monitoring equipment are within the expiration date. In the response to this report, provide the EPA and Blackfeet Tribe Environmental Department (Blackfeet Tribe) with a description of the corrective actions taken to address this finding.

Finding #2: Late submittal of Discharge Monitoring Reports.

Discharge Monitoring Reports (DMRs) for the timeframe between July 1, 2021, through December 31, 2021, were reviewed. The facility was late submitting five (5) DMRs. Specifically, for the monitoring periods in the table below, the facility submitted DMRs past the required submittal deadline:

DMR Monitoring period & location	DMR due date	DMR Submitted	Days late
September 30, 2021 (DWCD-M)	January 28, 2022	February 28, 2022	31 days
November 30, 2021 (DWCD-M)	January 28, 2022	February 28, 2022	31 days
December 31, 2021 (DWCD-M)	January 28, 2022	February 28, 2022	31 days
December 31, 2021 (DWCD-A)	January 28, 2022	February 28, 2022	31 days
December 31, 2021 (DWCD-B)	January 28, 2022	February 28, 2022	31 days

Permit Requirements:

Part 5.1 of the general permit requires the facility to comply with all conditions of the general permit and authorization MTDW0003I.

Part 4.4 of the general permit requires the electronic submittal of DMRs quarterly using NetDMR, and the submissions must be made no later than the 28th of the month following the completed reporting period.

Corrective Action:

Submit DMRs by the date required within the permit. In the response to this report, provide the EPA and Blackfeet Tribe with a description of the corrective actions taken to address this finding.

Finding #3: Cattails and vegetation were observed within the wastewater pond and berms of the pond.

Specifically, in wastewater pond 2 (north pond) there is a significant amount of cattail growth on all edges and growing within the pond.

Permit Requirements:

Part 5.5 of the general permit states on at least a weekly basis the facility must inspect its wastewater treatment facility. Part 5.5 also states required items to be inspected and documented.

Part 5.5.1.5 of the general permit states “check to see if there are any rooted plants, including weeds growing in the water”

Part 5.5.3 of the general permit states “problems identified during the inspection shall be addressed through proper operations and maintenance” (Part 5.6 of the general permit)

The facility is conducting weekly inspections and documenting the cattail encroachment in wastewater pond 2. The facility is also starting to clear cattails; however, this finding was documented in the previous EPA inspection (May 16, 2017); therefore, showing minimal operation and maintenance follow-through of problems identified within inspection reports.

Corrective Action:

Remove cattails from wastewater pond 2. In the response to this report, provide the EPA and Blackfeet Tribe with a description of the corrective actions taken to address this finding.

Recommendation #1: Backup generator.

Part 5.6 of the general permit states the facility must properly operate and maintain all facility and systems of operational control. This provision requires the operation of a back-up or auxiliary facilities. During the inspection, it was noted the facility does not have a back-up generator. To continue proper operation of the facility during power outages, it is recommended the facility obtain a generator sufficient to run the treatment plant at full load capacity.