



Ref: 8 Montana

SENT VIA EMAIL
DIGITAL READ RECEIPT REQUESTED

[REDACTED] Public Works Director
City of Hardin
[REDACTED]

Re: Inspection Report for City of Hardin/Wastewater Treatment Plant, NPDES Permit No. MT0030759

Dear [REDACTED]:

On May 14, 2024, representatives of the U.S. Environmental Protection Agency inspected the City of Hardin's wastewater treatment plant (site) in Big Horn County, Montana, partially within the exterior boundaries of the Crow Reservation. The inspection was conducted to evaluate compliance with the site's National Pollutant Discharge Elimination System permit. The inspection was conducted under the authority of Section 308 of the Clean Water Act. Enclosed is a report of the inspection.

I appreciate the time and assistance you and your staff provided during the inspection. Inspection findings are summarized within the enclosed inspection report in a table titled "Findings, Corrective Actions, and Recommendations." Within **thirty (30) days** of receipt of this report, please provide the EPA and the Crow Tribe with a summary of corrective actions taken to address each of the findings identified in the report and any information that may change the findings or content of the report. This summary should be sent to:

[REDACTED]
U.S. EPA Region 8 – Montana Office
[REDACTED]

[REDACTED]
Crow Tribe Environmental Director
[REDACTED]

Please contact me at [REDACTED] if you have any questions regarding this letter or the enclosed report. Please note, in the spirit of government transparency, EPA Region 8 has implemented an initiative to make inspection reports publicly available on the EPA's ECHO website (<https://echo.epa.gov/>). If you become aware of inaccuracies or have concerns about confidential business information or personal identifiable information contained in the report, please contact me as soon as practicable. This report will likely become publicly available within 10 days.

Sincerely,

[Redacted Signature]

Digitally signed by

Date: 2024.09.09 11:54:54
-06'00'

NPDES and Wetlands Enforcement Section
Enforcement and Compliance Assurance Division

Enclosures:

NPDES Inspection Report
Photo Log
SBREFA information sheet

cc (electronic):

[Redacted Name], Chairman, Crow Tribe
[Redacted Name] Environmental Director, Crow Tribe

NPDES Inspection Report

National Database Information	
Inspection Date: May 14, 2024	Inspection Type: CEI, Major POTW
Entry/Exit Time: 08:30 / 13:15	NPDES ID Number: MT0030759
NAICS Code: 221320 (Sewage Treatment Facilities)	Inspection ID: 202405_MT0030759
Lead inspector and affiliation: [REDACTED]	U.S. EPA Region 8, Montana Office
Inspector and affiliation: [REDACTED]	U.S. EPA Region 8

Facility Location Information (Name/Location/ Mailing Address)	
Site/Facility Name & Location: Hardin Wastewater Treatment Plant [REDACTED]	E-mail Report to: [REDACTED] Public Works Director City of Hardin [REDACTED]

Contact Information	
	Name(s)/Title
Facility Contacts:	[REDACTED] Lead Wastewater Operator, City of Hardin (present)
	[REDACTED] Public Works Director, City of Hardin (present)
	[REDACTED] Wastewater Operator, City of Hardin (present)
Person/Company meeting definition of "Operator" per the Permit	City of Hardin
Authorized Official(s)	[REDACTED] Public Works Director, City of Hardin

Permit Information	
Is the permit on site and available? Yes	
Effective Date: December 1, 2023	Expiration Date: November 30, 2028
Facility Latitude: 45.734722° N	Facility Longitude: 107.580278° W
Receiving Water(s): Bighorn 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>Effluent/Receiving Waters</u>	<i>Compliance Schedule</i>
<u>Records/Reports</u>	<u>Flow Measurement</u>	<i>Pollution Prevention</i>
<u>Facility Site Review</u>	<u>Self-Monitoring Program</u>	<u>Laboratory</u>

Report Review and Signature		
Drafter Name	Address/Phone Number	Date
Digitally signed by [REDACTED] Date: 2024.09.09 11:55:27 -06'00'	U.S. EPA Region 8, Montana Operations Office Helena, Montana [REDACTED]	
Reviewer Name	Address/Phone Number	Date
[REDACTED]	U.S. EPA Region 8 Denver, Colorado [REDACTED]	8/12/2024
Management Signature/Name	Address/Phone Number	Date
Digitally signed by [REDACTED] Date: 2024.09.04 07:28:21 -06'00'	U.S. EPA Region 8 Denver, Colorado [REDACTED]	8/30/2024
[REDACTED], NPDES and Wetlands Enforcement Section Supervisor		

Inspection Narrative and Site Description
<u>Entry/Introduction</u> On May 14, 2024, I, U.S. Environmental Protection Agency (EPA) inspector [REDACTED], accompanied by EPA inspector [REDACTED] (collectively, inspectors), conducted an announced compliance evaluation inspection at the Hardin Wastewater Treatment Plant (facility), located in Big Horn County, Montana. The inspection was conducted to evaluate compliance with the facility's National Pollutant Discharge Elimination System (NPDES) Permit No. MT0030759 (Permit). The facility was owned and operated by the City of Hardin (City) and was partially located within the exterior boundaries of the Crow Reservation (Reservation). A letter notifying the Crow Tribe of the EPA's inspection presence on the Reservation was sent on April 14, 2024. Throughout the inspection, the inspectors noted observations in bound notebooks and checklists which reflected conditions of the Permit. Photographs taken during the inspection are included in the attached photo log and are maintained by EPA in accordance with the Quality Assurance Field Activities Procedure and Standard Operating Procedure. The inspection commenced at approximately 08:30, when the inspectors arrived at the facility and met with facility representatives. The inspectors presented their credentials to [REDACTED] - Public Works Director, [REDACTED] Wastewater Operator, and [REDACTED] Operator, and had an opening conference where I outlined the intended format and scope of the inspection. The inspectors asked a series of questions of the facility representatives to help evaluate facility operations,

maintenance, and compliance with relevant CWA and NPDES requirements. Facility representatives provided an overview of the wastewater treatment system operations.

Facility Description

According to facility staff, the facility was originally constructed in 1978 and began operating in the early 1980s. The facility collects and treats domestic wastewater from the residence and businesses of the City of Hardin with a population of approximately 3,500 residents. According to facility representatives, industrial businesses of note within the City of Hardin include an automobile repair shop, three dental offices, medical facilities, a hospital, and a slaughterhouse. The City of Hardin does not have an approved pretreatment program, and representatives state they treat primarily domestic wastewater. Facility representatives indicated they believed most industrial waste generated by users was disposed of off-site, including from the slaughterhouse.

According to the September 10, 2019 EPA inspection report, the facility's collection system consists of approximately 80,800 linear feet of gravity sanitary sewer main, 235 sanitary manholes, and 4 lift stations. The City implements a preventative maintenance schedule for the collection system. The system is divided into 10 sections and is on a 5-yr rotating jet cleaning cycle. The collection system was upgraded in 2020 to include approximately 2,675 feet of pipe and 17 manholes. The upgrade was to reduce the amount of inflow/infiltration the system was experiencing, and therefore reduce the potential for future SSOs. The City has a Distribution/Collections Department, generally independent of the wastewater treatment plant operating staff, which maintains all the lift stations and the collection system.

The facility includes a headworks with influent screening and grit removal. Primary wastewater then flows to an oxidation ditch, two secondary clarifiers and a UV disinfection system. From the secondary clarifiers, return activated sludge (RAS) is directed back to the oxidation ditch and waste activated sludge (WAS) is intended to be directed into an aerobic digester. At the time of the inspection, the WAS valve from Clarifier 2 to the digester was broken, so all WAS from Clarifier 2 was directed into the sludge drying beds, discussed below. When needed, chlorine is used to control filamentous bacteria; no other chemicals are used in the treatment process. Sludge from the aerobic digester is pumped into one of the old lagoon cells being used as a drying bed prior to eventual disposal at the Hardin Landfill. Facility representatives indicated their goal was to haul dried sludge to the Hardin Landfill once per year, but this was not always feasible, as there were some years when sludge did not sufficiently dry. The facility also has one of the old lagoon cells that is used as a bypass when the facility experiences high flows in the spring. The uses of the old lagoon cells are shown in Figure 2.

The facility was planning to undergo an upgrade in 2020 to include an upgrade to the headworks system, installation of a backup power generator, and installation of a backup UV disinfection unit. An additional upgrade was set for 2022 to include the construction of a new intermittent cycle/extended aeration sequencing batch reactor (SBR) at the facility. None of the upgrades occurred. Facility representatives stated the process for upgrades have begun again, but they are not pursuing construction of a SBR plant, only improvements to the current facility components. The average design capacity of the current treatment plant is approximately 1.2 million gallons per day (MGD) with an actual average effluent flow usually between 0.5 and 0.9 MGD. The facility has an influent MagMeter located prior to the headworks; effluent flow is measured by a Parshall flume and ultrasonic transducer located just before the outfall.

Outfall 001 is to the Bighorn River. The facility has a SCADA system, but it has been unreliable in the past and was part of the upgrades planned in 2022.

Records Review and Opening Conference Discussion

The following records were requested for review in an email dated May 2, 2024, prior to the inspection. Records were made available to review on-site; inspectors did not have time to review all desired records during the inspection and requested the records be uploaded to a link provided to the facility on July 19, 2024. Requested information was uploaded on July 26, 2024, and a review of the records was completed on August 14 & 15, 2024.

- Copy of NPDES permit #MT0030759.
- Effluent flow values for monitoring periods ending January 1, 2023, through December 31, 2023.
 - Records reviewed for reported daily maximum and 30-day average values.
- In-house results for pH for monitoring periods ending January 1, 2023, through December 31, 2023.
 - Records reviewed for reported minimum and maximum concentration values.
- Laboratory analytical results for *Escherichia coli* (*E. coli*) bacteria for monitoring periods ending January 1, 2023, through December 31, 2023.
 - Records reviewed for geometric mean calculations and reported daily maximum and 30-day average values.
- Laboratory analytical results for influent and effluent biochemical oxygen demand and total suspended solids, for monitoring periods ending January 1, 2023, through December 31, 2023.
 - Records reviewed for monthly average and percent removal calculations and reported daily concentration maximum, 30-day concentration average, and 30-day percent removal values.
- Laboratory analytical results for nutrients and metals for monitoring periods ending January 1, 2023, through December 31, 2023.
 - Records reviewed for annual collection and reporting of daily maximum concentration values.
- Chain of Custody and Laboratory Analytical Reports for monitoring periods ending January 1, 2023, through December 31, 2023.
 - Records reviewed for sample holding times, preservation, and analytical methods.
- Records of Laboratory Equipment and Controls, including records of equipment calibration.
- Historic effluent violations from January 1, 2022, to March 1, 2024.

The inspectors discussed conditions of the current permit to include the requirement for an Industrial Waste Survey and industrial contributions to the facility, Operations and Maintenance Program requirements, in-house inspection requirements, and the requirement of a multi-sector general permit (MSGP) for stormwater discharges associated with industrial activity, to include pollutant sources on the facility grounds (under Sector T Treatment Works of the MSGP). Facility representatives stated they applied for a no exposure certification and received an email on March 23, 2019 (photo 2) confirming certification. The certification provided was under the 2015 MSGP; however, EPA databases show the facility applied for continued coverage under the 2021 MSGP and received certification on January 31, 2024 (expires February 28, 2026). Applicability of and compliance with MSGP no-exposure requirements was not evaluated during this inspection.

Facility Site Evaluation

After the facility records review, we walked through the wastewater treatment process. We started with the influent into the headworks building. Facility staff stated approximately 25% of all influent flow is currently being sent to the emergency overflow lagoon cell (located to the southwest of the facility; see Figure 2) (photo 22). The influent directed to the emergency overflow is a result of the facility potentially not having the operational capacity to sufficiently treat 100% of the wastewater influent due to one of the two aerators in the oxidation ditch being out of service; therefore, they are sending some flow to a holding cell with no intent of trickling it back in through the plant at a later date. The headworks has a main channel with a weir gate to divert influent flow into a bypass channel and manual bar screen (photos 3 & 4); at the time of the inspection, the facility was diverting flow through the bypass channel. The main channel includes an automatic vertical bar screen (photo 5); however, at the time of the inspection, the automatic bar screen was not operational so the reason the facility was diverting influent flow through the bypass channel and manual bar screen. All screening materials are transferred to the City of Hardin Landfill weekly.

All influent then flows into the oxidation ditch. At the time of the inspection one of two aerators within the oxidation ditch was inoperable (photo 6 & 7). The facility does not waste from the oxidation ditch. From the oxidation ditch, wastewater flows over a weir to a splitter box and is directed to two clarifier units (photo 8). Facility representatives stated the weir controlling flow from the oxidation ditch is currently broken, and therefore the facility cannot regulate the level of the oxidation ditch and the amount of wastewater flowing to the clarifiers. At the time of the inspection, wastewater was being split and directed into both clarifiers in parallel. The clarifiers are set up to have an outside feedwell, main settling well, saw-tooth weir with inner effluent launder. Clarifier #1 (southern) is being operated with a higher sludge blanket in the feedwell as well as the settling well (photo 9). Effluent in the launder appeared clear with little floc. RAS from Clarifier #1 is brought to the screw pump station which lifts into the oxidation ditch (photo 16). At the time of the inspection only one of the two screw pumps were operational. As discussed previously, the valve between Clarifier #1 and the digester was broken, so Clarifier #1 did not have the capability to waste sludge into the digester, therefore creating the high sludge blanket within the wells. Instead, WAS from Clarifier #1 was pumped directly to the sludge drying beds. Clarifier #2 (northern) had the ability to send RAS to the screw pump station and WAS to either the digester or drying beds. Clarifier #2 was operating and processing as designed as seen by the clear settling well (photo 10).

Effluent from both clarifiers is combined and flows to the UV units. The facility has two units with 3 banks of 4 bulbs each (photo 11). The facility runs one unit at a time and based on hours of run time, the units alternate automatically. After flowing through the UV, effluent flows over a weir where compliance samples are collected, and through part of the former chlorine contact chamber where it is measured through a Parshall Flume and ultrasonic meter (photos 12 & 13). Once through the flow meter, the effluent is piped to the Big Horn River at outfall 001 (photo 14).

Wasted sludge from Clarifier #2 moves to the aerobic digester (photo 15) to thicken prior to being pumped to one of two drying beds (Photos 17 - 19). The drying beds are part of the old wastewater lagoon cells. Facility staff indicated the eastern drying bed was partially cleaned in the spring of 2024. West of the drying beds, but still within one of the old treatment lagoons, the facility has a septage receiving station (photos 20 & 21). The septage receiving station water does not co-mingle with material

from the drying beds (located to the east) or with the emergency overflow cell (located to the east). We also viewed the emergency overflow lagoon cell (approximately 10.5-acres) where 25% of influent is being diverted (photo 22). The overflow pond does not discharge, nor is the wastewater brought back to the treatment plant for processing. In the southeast corner of the emergency overflow cell, is a small (approximately 0.05-acres) area which the City of Hardin dumps waste from their vac trucks; the material consists primarily of street and storm drain cleanings (photo 27). See figure 1 for flow diagram, and figure 2 for storage locations.

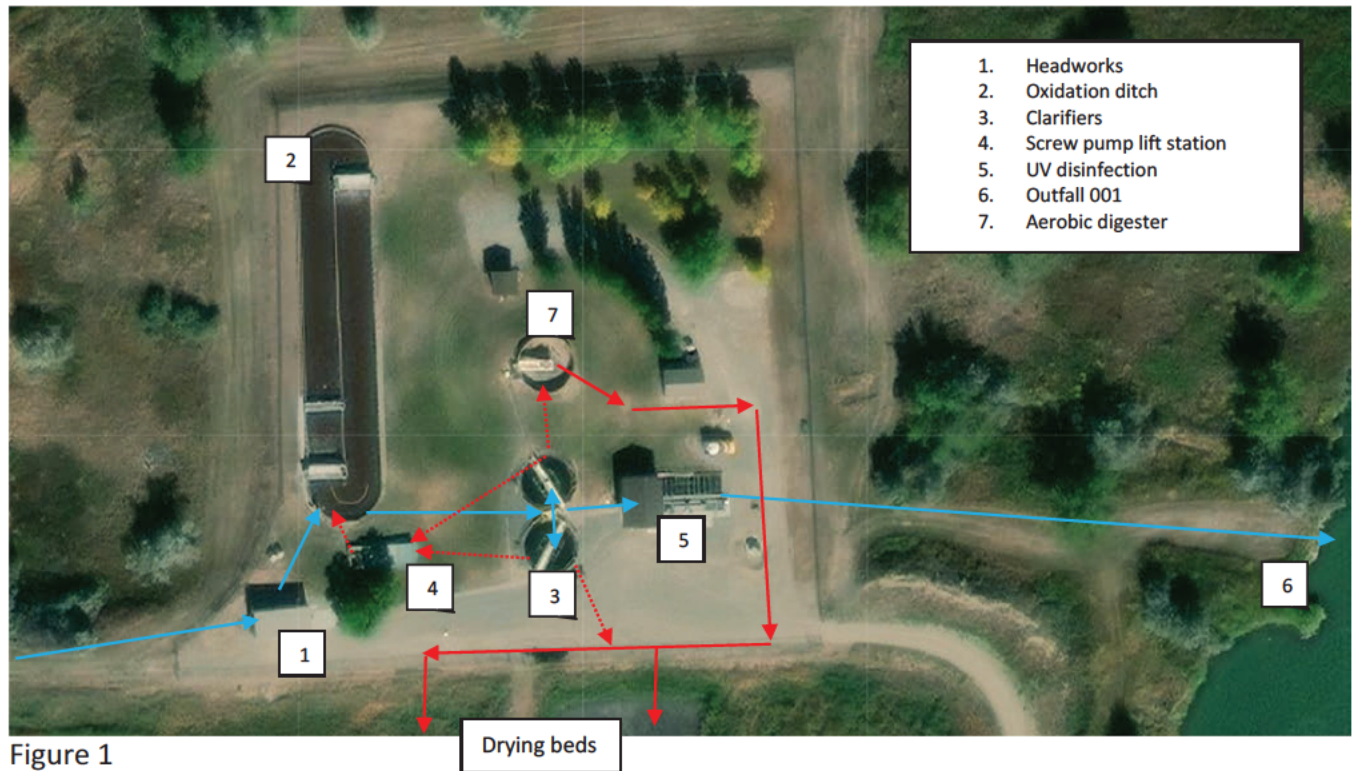


Figure 1



Figure 2.

Closing Conference

After the facility site review, a closing conference was held on-site with [REDACTED] during which the inspectors discussed preliminary findings, as well as the process for the inspection report. The inspection concluded at approximately 13:15.

Findings, Corrective Actions and Recommendations

Finding #1: Failure to properly operate and maintain facility equipment.

Specifically, the facility is not properly operating and/or maintaining the following facility equipment:

- automatic bar screen was not operational;
- one aerator within the oxidation ditch was inoperable;
- the weir between the oxidation ditch and the clarifiers is currently broken, and therefore the facility cannot regulate the level of the oxidation ditch or the amount of wastewater flowing to the clarifiers;

- Clarifer #1 does not have the capability to waste sludge into the digester;
- Clarifer #1 is being operated with a high sludge blanket in the feedwell as well as the settling well;
- only one of the two screw pumps in the RAS lift station were operational; and
- approximately 25% of all influent flow is currently being sent to the emergency overflow lagoon cell. The influent directed to the emergency overflow is a result of the facility not having the operational capacity to treat 100% of the wastewater and stay in compliance with their permit.

Permit requirement:

Code of Federal Regulations (C.F.R.), Title 40 §122.41(e) and Part 6.3 of NPDES permit #MT0030759 states “The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the Permit.”

40 C.F.R. §122.41(a) and Part 8.1 of NPDES permit # MT0030759 states “The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.”

Corrective Action:

The facility is required to properly operate and maintain all facility equipment. In the response to this report, provide EPA and the Crow Tribe Environmental Department with a description of the corrective actions the City has taken or plans to take to address each of the items in this finding, including a plan and schedule for completing these improvements and when the City expects the overall facility will be returned to proper operation conditions.

Finding #2: The facility did not have a backup power source to continue operations in case of power failure.

Specifically, proper operation and maintenance of the facility to achieve compliance with the conditions of the permit includes having a backup power source to continue operations of the facility during power outages. During power outages, treatment processes (e.g., oxidation ditch and UV disinfection system) become inoperable, and facility operators must manually divert the raw influent to the lagoon basin via a manual valve near the headworks of the facility. Facility representatives indicated that, after influent is manually redirected into the overflow cell, un-disinfected effluent continues to discharge through the outfall for approximately 20 minutes before flow ceases. In total, un-disinfected effluent flows through the outfall for this 20 minute window plus the time it may take for operators to identify and respond to a power outage. This is a repeat finding from EPA’s previous inspections conducted on 09/12-13/2017 and 09/10/2019.

Regulatory Requirement:

40 C.F.R. §122.41(e) and Part 6.3 of NPDES permit #MT0030759 states, “The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions

of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality control procedures. This provision requires the operation of a back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.”

40 C.F.R. §122.41(a) and Part 8.1 of NPDES permit # MT0030759 states “The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.”

Corrective Action:

Ensure the facility installs an appropriate backup power source. In the response to this report, provide EPA and the Crow Tribe Environmental Department with a description of the corrective actions the City has taken or plans to take to address this finding, including a plan and schedule for completing these improvements.

Finding #3: Buffer solutions for pH calibration were expired.

Specifically, the City of Hardin’s Wastewater Treatment Plant’s buffer solutions for calibrating the pH meter are expired. The facility uses buffer solutions 7 (expired April 2024) and 10 (expired May 2024).

Regulatory requirement:

Parts 3 and 4 and Tables 2 and 3 of NPDES permit #MT0030759 indicates the sample type and monitoring frequency.

40 C.F.R. §122.41(J)(4) and Part 7.2 of NPDES permit #MT0030759 requires monitoring to be conducted according to test procedures approved under 40 C.F.R. Part 136.

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.

40 C.F.R. §122.41(a) and Part 8.1 of NPDES permit # MT0030759 states “The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.”

Corrective Action:

Laboratory equipment is required to be calibrated by Standard Methods or Part 136, Title 40 of the Code of Federal Regulations. Ensure buffer solutions used in the calibration of all monitoring equipment (pH meter) are within the expiration date. In the response to this report, provide the EPA and the Crow Tribe Environmental Department with a description of the corrective actions taken to address this finding.

Finding #4: The facility did not have current or complete operation and maintenance manual.

Specifically, the facility’s operation and maintenance manual has not been updated in over 5 years, as well as some updates such as pumps, were not included within the manual.

Regulatory Requirement:

Part 6.3.1.1 of NPDES permit #MT0030759 states the permittee shall have a current operations and maintenance manual that describes the proper operational procedures and maintenance requirements of the wastewater treatment facility, as required by the previous permit, and make any necessary updates as soon as possible, but no later than six months after the effective date of this permit.

40 C.F.R. §122.41(a) and Part 8.1 of NPDES permit # MT0030759 states “The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.”

Corrective Action:

Update the current operations and maintenance manual to include all current operational procedures. In the response to this report, provide the EPA and the Crow Tribe Environmental Department with a description of the corrective actions taken to address this finding.

Finding #5: Calculation records do not use the correct data to complete calculations.

Specifically, the facility collected samples for BOD₅, TSS, and E.coli on May 31, 2023; the analysis results were included in the calculations for the month of June (as taken on June 1, 2023), not May; therefore, monitoring periods ending May 31, 2023, and June 30, 2023, have incorrect 30-day average reported results.

Regulatory Requirement:

Part 1 of the NPDES permit #MT0030759 defines the 30-day (monthly) average as “other than for microbiological organisms (e.g., bacteria, viruses, etc.), is the average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month...”

Corrective Action:

Calculate 30-day averages with all samples collected within the calendar month. Provide the EPA and the Crow Tribe Environmental Department with the next 3 months of data (analytical reports, in-house bench sheets, and calculation sheets) to verify calculations are being conducted and reported correctly. In the response to this report, provide the EPA and the Crow Tribe Environmental Department with a description of the corrective actions taken to address this finding.

Finding #6: Calculation records do not use the correct data to complete calculations.

Specifically, the facility collected influent and effluent samples on the following dates and did not use them in the respective calculations for averages and/or percent removal.

Sample Collection Date	TSS Influent Result (mg/L)	TSS Effluent result (mg/L)	BOD ₅ Influent result (mg/L)	BOD ₅ Effluent result (mg/L)	E.coli Effluent result (CFU/100ml)	Monitoring period affected
01/30/2023	162.00	5.67				01/31/2023
04/29/2023	147.50	2.00				04/30/2023
05/30/2023	155.50	3.00				05/31/2023

05/31/2023	74.00	6.83	71.00	8.30	37	05/31/2023
07/29/2023	115.00	1.83				07/31/2023
09/29/2023	168.50	2.58				09/30/2023
10/29/2023	101.50	1.67				10/31/2023
12/28/2023 (second sample)	115.00	13.75				12/31/2023

Regulatory Requirement:

40 C.F.R. §122.41(I)(4)(ii) and Part 7.6 of NPDES permit #MT0030759 states if the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under [40 CFR Part 136](#), or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

40 C.F.R. §122.41(a) and Part 8.1 of NPDES permit # MT0030759 states “The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.”

Corrective Action:

The facility must use all collected data, provided it is analyzed using 40 CFR Part 136 methods, in all calculations for compliance monitoring results. Provide the EPA and the Crow Tribe Environmental Department with the next 3 months of data (analytical reports, in-house bench sheets, and calculation sheets) to verify calculations are being conducted and reported correctly. In the response to this report, provide the EPA and the Crow Tribe Environmental Department with a description of the corrective actions taken to address this finding.

Finding #7: Calculation records do not use the correct data to complete calculations.

Specifically, the facility is using a ‘0’ in calculations where a non-detect (ND) or less-than (<) value was reported on the analytical report. The facility used a ‘0’ in BOD₅ average and percent removal calculations for the following sample collection dates: January 18, 2023, March 8, 2023, March 15, 2023, April 12, 2023, April 26, 2023, May 24, 2023, and November 1, 2023. When using a reported non-detect or less-than value in a calculation of any kind (including averages), verify the detection limit is correct, and complete the calculation by using the detection limit value in place of the non-detect or less-than value.

Regulatory Requirement:

Part 1 of the NPDES permit #MT0030759 defines the 30-day (monthly) average as “other than for microbiological organisms (e.g., bacteria, viruses, etc.), is the average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month...”

Part 1 of the NPDES permit #MT0030759 defines the 7-day (weekly) average, other than for microbiological organisms (e.g., bacteria, viruses, etc.), as “the average of “daily discharges” over a calendar week, calculated as the sum of all “daily discharges” measured during a calendar week divided

by the number of “daily discharges” measured during that week... The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week, which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains the Saturday. (40 CFR § 122.2).”

Part 4, Table 3, footnote /b/ of MPDES permit #MT0030759 states “30-Day Avg. % removal – Calculate the 30-Day Avg. in the influent for each month and effluent for each month and then calculate and report the 30-Day Avg. percent removal for the month (30-Day Avg. percent removal. = (influent 30-Day Avg. – effluent 30-Day Avg.)/influent 30-Day Avg. x 100%).”

40 C.F.R. §122.41(a) and Part 8.1 of NPDES permit # MT0030759 states “The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.”

Corrective Action:

The facility must calculate reportable result by using the verified detection limit in place of a non-detect or less-than value. Provide the EPA and the Crow Tribe Environmental Department with the next 3 months of data (analytical reports, in-house bench sheets, and calculation sheets) to verify calculations are being conducted and reported correctly. In the response to this report, provide the EPA and the Crow Tribe Environmental Department with a description of the corrective actions taken to address this finding.

Finding #8: Samples results were transposed incorrectly.

Specifically, the facility did not correctly transfer the sample result values from the analytical sheets to the in-house calculation sheets used to derive permit required reporting. The facility incorrectly transferred the following *E. coli* sample results:

Sample collection date	Analytical laboratory result	Internal spreadsheet result	Reported geometric mean	corrected geometric mean
01/18/2023	4.0	1.0	2.0	3.0
05/03/2023	19	1.0	2.0	7.33
07/26/2023	2.0	1.0	2.0	2.3

The corrected geometric mean does not place the facility in exceedance of the required permit limits.

Regulatory Requirement:

40 C.F.R. §122.41(a) and Part 8.1 of NPDES permit # MT0030759 states “The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.”

Part 9.7.4 of NPDES permit #MT0030759 states all reports required by the permit and other information

required by the EPA must be signed by a signatory authority or duly authorized representative of that person. Part 9.7.6 states signing a document makes the following 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 assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those 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 fine and imprisonment for knowing violations."* Discharge monitoring reports are required reports and include the same certification statement.

Corrective Action:

The facility must ensure numbers from the analytical report are accurately transposed to the in-house spreadsheets used to calculate reportable results. Provide the EPA and the Crow Tribe Environmental Department with the next 3 months of data (analytical reports, in-house bench sheets, and calculation sheets) to verify calculations are being conducted and reported correctly. In the response to this report, provide the EPA and the Crow Tribe Environmental Department with a description of the corrective actions taken to address this finding.

Finding #9: Calculation records do not use the correct data to complete calculations.

Specifically, the facility collects weekly influent and effluent BOD₅ and TSS for calculating percent removal of each parameter. The facility is calculating the BOD₅ and TSS percent removal on a weekly basis and reporting the lowest weekly percent for each parameter instead of calculating the percent removal with 30-day BOD₅ and TSS averages.

Regulatory Requirement:

Part 3, Table 2, footnote /b/ of NPDES permit #MT0030759 states "Percentage Removal Requirements (TSS and BOD5 Limitation): In addition to the concentration limits for Total Suspended Solids (TSS) and BOD5 indicated above, the arithmetic mean of the concentration for effluent samples collected in a calendar month shall not exceed 15 percent of the arithmetic mean of the concentration for influent samples collected at approximately the same times during the same period (85 percent removal)."

Part 4, Table 3, footnote /b/ of MPDES permit #MT0030759 states "30-Day Avg. % removal – Calculate the 30-Day Avg. in the influent for each month and effluent for each month and then calculate and report the 30-Day Avg. percent removal for the month (30-Day Avg. percent removal. = (influent 30-Day Avg. – effluent 30-Day Avg.)/influent 30-Day Avg. x 100%)."

40 C.F.R. §122.41(a) and Part 8.1 of NPDES permit # MT0030759 states "The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application."

Corrective Action:

The facility must ensure the BOD₅ and TSS percent removal calculations are using 30-day averages for influent and effluent. Provide the EPA and the Crow Tribe Environmental Department with the next 3 months of data (analytical reports, in-house bench sheets, and calculation sheets) to verify calculations

are being conducted and reported correctly. In the response to this report, provide the EPA and the Crow Tribe Environmental Department with a description of the corrective actions taken to address this finding.

Recommendation #1

The facility uses the thermometer within the pH meter as the compliance temperature. This thermometer should be calibrated against a national institute of standard technology (NIST) thermometer at least annually and recorded in facility records.