

NPDES Inspection Report – Wastewater Treatment Facility

National Database Information	
Inspection Date: June 29, 2021	Inspection Type: CEI – Wastewater Treatment Facility, Minor
Entry / Exit Time: 11:00am / 3:45pm	NPDES ID Number: WYG589101
NAICS Code: 221320 (Sewage Treatment Facilities)	Inspection ID: 202106_WYG589101
Lead inspector and affiliation: Jessica Duggan / U.S. EPA Region 8	
Inspector and affiliation: Kristin Ratajczak / U.S. EPA Region 8	

Facility Location Information	
Site/Facility Name & Location: Fort Washakie Hotsprings Lagoon N S12 T01S R02W Fort Washakie, Wyoming 82514 43.007849° N, -108.824748° W	Email Report to: Erin Martin, Utility Director Shoshone Utility Organization emartin@easternshoshone.org

Contact Information	
	Name(s)/Title
Facility Contacts:	Erin Martin / Utility Director / Shoshone Utility Organization (present)
Tribal Environmental Contacts	Eastern Shoshone Tribe (not present)
Indian Health Service (IHS) Contacts	Quentin Allen / Engineer Consultant / IHS (not present)
Person/Company meeting definition of “Owner”	Eastern Shoshone Tribe
Person/Company meeting definition of “Operator”	Shoshone Utility Organization
Responsible Official(s)	Erin Martin / Utility Director / Shoshone Utility Organization (present)

Permit / Facility Information	
Is the permit on site and available? Yes	Is the Facility under a compliance schedule? No
Permit Effective Date: April 5, 2016	Permit Expiration Date: December 31, 2020; Administratively Continued
Lagoon Category: Subcategory A	Monitoring Frequency: Monthly
Is correct contact information indicated on ICIS? Yes	Indicate correct contact information: N/A
Discharge point location (latitude, longitude): Outfall 001A = 43.007849° N, -108.824748° W	

Outfall 002A = 43.007300° N, -108.824920° W Outfall 003A = 43.006203° N, -108.828584° W
Receiving Water(s): Trout Creek
Inspector's source of information: EPA records, permit, EPA's Integrated Compliance Information System (ICIS), aerial imagery, facility representatives, facility records, and site review.

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	Date	Address/Phone Number
Jessica Duggan	9/10/2021	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202 303-312-6195
Reviewer Name	Date	Address/Phone Number
Kristin Ratajczak	9/13/2021	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202 303-312-6310
Management Reviewer Signature	Date	Address/Phone Number
MICHAEL BOEGLIN  Digitally signed by MICHAEL BOEGLIN Date: 2021.09.14 22:18:59 -06'00'	9/14/2021	U.S. EPA Region 8 1595 Wynkoop Street 8ENF-W-NW Denver, Colorado 80202 303-312-6250
Michael Boeglin, NPDES and Wetlands Enforcement Section Chief		

Inspection Narrative and Site Description

Introduction and Background

On Tuesday, June 29, 2021, U.S. Environmental Protection Agency (EPA) inspectors Jessica Duggan and Kristin Ratajczak (jointly referred to as inspectors), conducted a compliance evaluation inspection at the Fort Washakie Hotsprings Lagoon wastewater treatment facility (WWTF, lagoon, or facility), located approximately 3 miles east of Fort Washakie, Wyoming, on the Wind River Reservation. The facility was a publicly owned treatment works (POTW) comprised of a collection system and lagoon system owned by the Eastern Shoshone Tribe (Tribe) and operated by Shoshone Utility Organization (Shoshone Utilities, or SUO). The purpose of the inspection was to evaluate compliance with the facility's National Pollutant Discharge Elimination System (NPDES) permit. The EPA is responsible for implementing the NPDES program in Indian Country within the State of Wyoming. The facility was covered under the EPA Region 8 NPDES Lagoon General Permit for Wastewater Lagoons in Indian Country with "Subcategory A – Monthly Monitoring" authorization and facility-specific NPDES permit number WYG589101 (Permit).

The inspection was coordinated with Shoshone Utility Organization Director, Erin Martin approximately two weeks in advance. The Tribe was notified of the inspection in a letter sent June 7, 2021. Indian Health Services (IHS) representatives were notified of the inspection, but were unable to attend. Throughout the inspection, inspectors noted observations and descriptions of photographs in bound checklists reflecting conditions of the Permit. Erin Martin was also the contact for the Fort Washakie Drinking Water Treatment Plant (WTP). Photographs taken during the Fort Washakie Hotsprings Lagoon inspection are included in the attached photo log (Photos 9 - 32).

Opening Conference and Discussion

EPA inspectors arrived at the SUO office at approximately 8:30am and conducted an opening conference with Utility Director, Erin Martin for both the WWTF and WTP. Inspectors presented their credentials and held an opening meeting to explain the purpose of the EPA inspections. Inspectors discussed and reviewed the WTP facility and records before discussing the WWTF and began evaluating the lagoon at approximately 11:00am. Inspectors proceeded to ask questions to the facility representative to evaluate compliance with the WWTF's Permit. Mr. Martin provided an overview of the lagoon's service area, collection system, wastewater operations & maintenance (O&M), sampling and laboratory data, and planned construction upgrades to the lagoon system. Facility site visits were conducted after the records review and started with the WTP, then the WWTF.

Facility Description and Process Overview

Fort Washakie WWTF is an eight-cell lagoon system that serves the three housing units in the Fort Washakie area, Bureau of Indian Affairs (BIA) buildings (BIA compound), IHS clinic, Fort Washakie school, a grocery store, and approximately 1/3 of the residences in the water distribution system. All wastewater gravity flows to the lagoon system. During the inspection, the facility representative indicated that the lagoon system was not functioning properly; the facility has planned construction upgrades for the wastewater lagoon cells, which will be discussed below.

The current facility design has two primary Cells (A and B), four Wetland Cells (1A, 2A, 1B, and 2B), and two polishing ponds (North Polishing Pond and South Polishing Pond). Influent wastewater gravity flows from the collection system and flows into primary Cell A. Additionally, domestic septic haulers discharge approximately 2,000 – 3,000 gallons per week into the collection system via a manhole

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located 500 yards upstream of Cell A. The wastewater flows from Cell A to Cell B, and both primary cells have aerators. From Cell B, the wastewater flows to a splitter box to discharge into the wetland cells. The four wetland cells are operated in two series; wastewater is directed to either Wetland Cells 1A and 2A or Wetland Cells 1B and 2B. The lagoon system is designed to have wastewater from Wetland Cells 2A and 2B flow into a splitter box and is directed to either the North Polishing Pond or South Polishing Pond. The North Polishing Pond discharges through Outfall 001A and the South Polishing Pond discharges through Outfall 002A. Additionally, the facility may discharge from Cell B through Outfall 003A. All three outfalls discharge to Trout Creek.

In 2019, the Indian Health Services (IHS) funded a project to camera the collection system and identify areas of inflow and infiltration (I&I) into the collection system. As a result, identified manholes were coated or lined to help prevent I&I. The facility also performs jetting or cleaning in about 5-6 collection lines per month. Parts of the collection system, such as the BIA compound that had an SSO in October 2019, receive attention and occasionally jetting.

Below is a diagram of the WWTF from a previous EPA inspection with the cells labeled.



During the inspection, the planned construction at the wastewater lagoon was discussed and the engineering drawings were emailed to the EPA. The facility is working with IHS on this project and Kraig Johnson is the design engineer with Keviva Water Technologies LLC. The construction will convert the lagoon system to utilizing Cells A and B only and splitting each of these cells into two. The construction will include desludging Cells A and B, constructing temporary sludge drying beds, installation of new liners, upgrading the aeration system, installing biodomes, and discharging through the current Outfall 003A. The facility will be constructing temporary sludge drying beds just south of the lagoons that will be lined with 30-millimeter-thick poly liners. The facility plans to dry all removed sludge in these beds for approximately one year and then dispose of it in a landfill. The removed vegetation and cattails from Cells A and B will be stockpiled onsite. The current Outfall 003A will be converted to the primary outfall for the facility and will discharge to Trout Creek.

The Wetland Cells and Polishing Ponds will no longer be part of the treatment process but will remain as a backup. Given the current state and integrity of the existing wetland cells, splitter boxes, and

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polishing ponds, as described in the Facility Review section below, the lagoon system will likely not be able to treat wastewater or possibly hold the wastewater, even as a backup system.

The facility obtained a construction stormwater permit (NDPES permit WYR10I009), and a stormwater pollution prevention plan (SWPPP) was developed for the lagoon upgrades. The facility representative indicated that anticipated construction would be completed by end of summer 2021, but the Notice of Intent for the construction stormwater states the project will end 8/31/2022. Inspectors did not conduct a construction stormwater inspection as part of the lagoon inspection.

Records Review

Prior to the facility site review, inspectors reviewed records kept in the SUO office. Inspectors reviewed the March 2020 and April 2020 discharge monitoring reports (DMRs) and laboratory analytical reports. Additionally, the DMR data reported to the EPA through the NetDMR system was reviewed from January 2020 - June 2021. The majority of DMRs reviewed from January 2020 – June 2021 were reported as “No Discharge” for Outfalls 001A, 002A, and 003A. Effluent exceedances in March 2020, April 2020, and June 2021 DMRs are noted in the Findings, Corrective Actions, and Recommendations section, below.

According to the facility representative, Cell A was drained in March 2021 and a discharge occurred, but no samples were collected. The DMRs for March 2021 were incorrectly submitted with No Discharge Indicator Code (NODI) C (No Discharge) for Outfalls 001A, 002A, and 003A. On July 29, 2021, the March 2021 DMR for Outfall 001A was corrected and resubmitted with NODI code E (Analysis Not Conducted/No Sample).

During the discussion about DMRs, Mr. Martin informed inspectors that the facility has been monitoring for *Escherichia coli* (E. coli), as required by the Permit, but the DMRs do not have a line to report the data. Additionally, the number of samples collected was entered in the column labeled “# of Ex.” The “# of Ex.” column represents the number of exceedances, or effluent violations, reported by the facility, rather than number of samples. On future DMRs, Mr. Martin will be entering the number of exceedances in this column.

The facility was conducting weekly inspections and maintained a notebook of the inspections. The logs included most of the Permit-required information, except the following: name of the facility, the permit number, description of actions taken with regard to identified problems, and the date scheduled to undertake O&M at the facility.

In October 2019, Shoshone Utilities reported a sanitary sewer overflow (SSO) to EPA from the collection system near the BIA compound. The SSO was likely caused by a collection system liner installed prior to 2005 that had come loose. From the notes taken by the EPA, the SSO flowed into a marshy, riparian area approximately 0.15 miles south of the Little Wind River. The Shoshone Utilities scheduled a vacuum truck to remove as much SSO residue from the riparian area as possible. Photographs and emails exchanged about this incident were saved in the facility file.

Facility Review

Prior to the onsite inspection at the WWTF, inspectors viewed information at the WTP and laboratory.

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Inspectors noted that the pH 10 buffer used to calibrate the pH meter expired in March 2021. The pH 4 and pH 7 buffers were within the expiration timeframes. The same pH probe and buffer solutions are used for the WTP and the WWTF.

Inspectors began the onsite inspection at the WWTF influent manhole (photo 10). Inspectors noted that trash was removed from the wastewater lagoon influent manhole and placed on the ground next to the manhole. There was no trash receptacle to place the trash and solids removed from the influent wastewater manhole. Wastewater flowed into the primary Cell A (photos 9, 11-13) and flowed into Cell B (photos 14-16); neither cell was operating properly. The berms of Cell A and B were overgrown with vegetation. Abundant cattails and other vegetation was growing and floating inside Cells A and B (photos 9, 11-16). There was black floating material and green scum in the wastewater (photo 15), and not all the aerators were functioning in Cells A and B during the inspection (photo 11 and 14).

Inspectors walked around Cell B and observed Outfall 003A on the south side of Cell B (photo 18 and 19). The lagoon upgrades will convert this outfall to the primary outfall for the WWTF. The splitter box from Cell B allowed the wastewater to be distributed to Wetland Cells 1A and 1B (photo 22). Wetland Cells 1A and 1B were overgrown with abundant vegetation within the cells and dead organics (photos 20 and 21). Vegetation was overgrown around the valves for water control to the Wetland Cells (photo 23). Animal burrows and holes were observed on the berms near the Wetland Cells (photo 24). Wastewater flowed through the Wetland Cells 1A, 1B, 2A, and 2B, but the boundaries of the individual cells was difficult to distinguish. The facility representative stated that the Wetland Cells were not treating the wastewater anymore, and instead were adding BOD to the lagoon system. In August 2020, H&S Environmental representative, Steve Harris, conducted a performance evaluation of the WWTF and noted that the “cattail root mass has obstructed wetland manifolds interfering with even distribution of sewage through the wetland treatment cells.”

From the Wetland Cells, the system was designed to convey wastewater through a splitter box and piping to distribute to the North and South Polishing Ponds. During the inspection, the splitter box and piping to the South Polishing Pond was not operational; thereby, unintentionally excluding the South Polishing Pond and the treatment capacity of this cell (photo 30). Inspectors observed wastewater leaking and discharging from the side or toe of Wetland Cell 2A. The wastewater flowed across the surface of the lagoon cell berm to the North Polishing Pond, but not in a controlled or directed pathway (photo 32). The leakage was also causing erosion and channelization within the Wetland Cell 2A berm wall. After the planned lagoon upgrades, the Wetland Cells and Polishing Ponds will no longer be part of the treatment process but will remain as a backup; however, uncontrolled leakage through a lagoon cell berm is not an adequate backup system. The current state and integrity of the existing Wetland Cells, Polishing Ponds, and operational control devices (splitter box, valving, piping, etc.) likely will not be able to treat wastewater, even as a backup system.

The North Polishing Pond was discharging through Outfall 001A during the inspection (photo 29). The North Polishing Pond had abundant cattails in the cell and vegetation on the berms (photo 26). Scum or algae was observed within the North Polishing Pond (photo 27) and animal burrows or holes were observed on the berms (photo 28).

As noted previously, the South Polishing Pond was not in use at the time of the inspection and was

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overgrown with vegetation inside the cell and along the berm (photo 30). Outfall 002A from the South Polishing Pond was dry and dead organics were visible in the weir box (photo 31).

Inspectors noted that all manholes and splitter boxes in the lagoon system were left open, even when no operators were onsite. There was also no sign on the gate to warn the public. Additional observations from the facility review are included in the attached photo log.

Closing and Follow-Up

Inspectors conducted a closing conference and discussed preliminary findings with Mr. Martin at the end of the site visit.

On July 9, 2021, the EPA sent an email to Mr. Erin Martin with the preliminary findings from the inspection. On July 28, 2021, the EPA received a notice of noncompliance for the BOD and TSS effluent exceedances from the samples collected on June 29, 2021. There was additional email communication on August 2, 3, 4, and 9, 2021, regarding the discharge status of the lagoons, planned construction, construction stormwater permit, and SWPPP.

Findings identified during the inspection are included in the Findings, Corrective Actions, and Recommendations section, below.

Findings, Corrective Actions, and Recommendations

Finding 1: Uncontrolled leakage through Wetland Cell 2A was observed, and wastewater discharged through uncontrolled pathways to the North Polishing Pond. The facility was unable to direct flow to the South Polishing Pond.

From the Wetland Cells, the lagoon system was designed to convey wastewater through a splitter box and piping to distribute to the North and South Polishing Ponds. During the inspection, the splitter box and piping to the South Polishing Pond was not operational; thereby, unintentionally excluding the South Polishing Pond and the treatment capacity of this cell (photo 30). Inspectors observed wastewater leaking and discharging from the side or toe of the Wetland Cell 2A. The wastewater flowed across the surface of the lagoon cell berm to the North Polishing Pond, but not in a controlled or directed pathway (photo 32). The leakage was also causing erosion and channelization within the Wetland Cell 2A berm wall. After the planned lagoon upgrades, the Wetland Cells and Polishing Ponds will no longer be part of the treatment process, but will remain as backup; however, uncontrolled leakage through a lagoon cell berm is not an adequate backup system. The current state and integrity of the existing Wetland Cells, Polishing Ponds, and operational control devices (splitter box, valving, piping, etc.) likely will not be able to treat wastewater, even as a backup system.

Permit Requirements:

Part 6.5 of the Permit states, “Proper Operation and Maintenance: 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. However, the permittee shall operate, at a minimum, one complete set of each main line unit treatment process whether or not this process is needed to achieve permit effluent compliance.

In addition to the operation and maintenance items in the manual for the lagoon system, the permittee shall do the following maintenance:

- 6.5.1. Take necessary action to promptly correct the problem of leakage through the dikes;
- 6.5.2. Take necessary action to promptly remove burrowing animals from the dikes;
- 6.5.3. Promptly repair damage to dikes caused by burrowing animals and/or erosion;
- 6.5.4. Remove rooted plants, including weeds, from the water on a regular basis or as needed; and
- 6.5.5. Keep the dikes mowed on a regular basis during the growing season or as needed (e.g., keep growth below 6" in height)."

Corrective Action:

Properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permitted to achieve compliance with the conditions of this Permit. Based on the information provided about the planned lagoon upgrades, the Wetland Cells 1A, 1B, 2A, 2B, North Polishing Pond, and South Polishing Pond are to remain as back-up units. Promptly correct and repair damage to Wetland Cells 2A, operational control devices (i.e., splitter box, valving, piping, etc.), and restore functionality to utilize all cells, including South Polishing Pond. Provide the EPA with photos and a description of the corrective actions taken to address this finding.

Findings, Corrective Actions, and Recommendations

Finding 2: Proper operation and maintenance activities were not performed at the facility.

Inspectors noted the following O&M activities that required attention:

- WWTF Cells A and B were not properly operating. There was black floating material and green scum in the wastewater (photo 15), and not all the aerators were functioning in Cells A and B during the inspection (photo 11 and 14).
- Abundant vegetation and cattails were present and growing within all lagoon cells (i.e. Cell A, Cell B, Wetlands Cell 1A, 2A, 1B, and 2B, North Polishing Pond, and South Polishing Pond). The dikes of the lagoon cells were overgrown with vegetation that was more than 6 inches in height. The boundaries of the wetland cells were difficult to distinguish. The berms of Cell A and B were overgrown with vegetation. Abundant cattails and other vegetation was growing and floating inside Cells A and B (photos 9, 11-16). Wetland Cells 1A and 1B were overgrown with abundant vegetation within the cells and dead organics (photos 20 and 21). Vegetation was overgrown around the valves for water control to the Wetland Cells (photo 23). The North Polishing Pond had abundant cattails in the cell, vegetation on the berms (photo 26), and scum or algae was observed within cell (photo 27). The South Polishing Pond was not in use at the time of the inspection and was overgrown with vegetation inside the cell and along the berm (photo 30).
- Animal burrows and holes were observed on the berms near the Wetland Cells (photo 24), and on the berms of the North Polishing Pond (photo 28).

Permit Requirements:

Part 6.5 of the Permit states, “Proper Operation and Maintenance: 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. However, the permittee shall operate, at a minimum, one complete set of each main line unit treatment process whether or not this process is needed to achieve permit effluent compliance.

In addition to the operation and maintenance items in the manual for the lagoon system, the permittee shall do the following maintenance:

- 6.5.1. Take necessary action to promptly correct the problem of leakage through the dikes;
- 6.5.2. Take necessary action to promptly remove burrowing animals from the dikes;
- 6.5.3. Promptly repair damage to dikes caused by burrowing animals and/or erosion;
- 6.5.4. Remove rooted plants, including weeds, from the water on a regular basis or as needed; and
- 6.5.5. Keep the dikes mowed on a regular basis during the growing season or as needed (e.g., keep growth below 6" in height)."

Corrective Action:

Remove rooted plants from the water, remove overgrown vegetation, and keep berms mowed on a regular basis during the growing season (keep growth below 6" in height). Remove burrowing animals and repair erosion on berms. Provide the EPA with photos and a description of the corrective actions taken to address this finding.

Findings, Corrective Actions, and Recommendations

No corrective action to repair or replace the aerators in Cells A and B is requested at this time, due to the planned lagoon upgrades to Cells A and B.

Finding 3: Trash removed from the influent manhole was placed on the ground adjacent the manhole.

Inspectors began the onsite inspection at the WWTF influent manhole (photo 10). Inspectors noted that trash was removed from the wastewater lagoon influent manhole and placed on the ground next to the manhole. There was no trash receptacle to place the trash and solids removed from the influent wastewater manhole.

Permit Requirements:

Part 6.6 of the Permit states, “Removed Substances. Collected screenings, grit, solids, sludge (including sewage sludge), or other pollutants removed in the course of treatment shall be buried or disposed in a manner consistent with all applicable federal and tribal regulations (e.g., 40 C.F.R. Part 257, 40 C.F.R. Part 258, 40 C.F.R. Part 503). Sludge/digester supernatant and filter backwash shall not be directly blended with or enter either the final plant discharge and/or waters of the United States.”

Corrective Action:

Ensure that all solids, or other pollutants removed from the influent manhole are disposed in a manner consistent with all applicable federal and tribal regulations. Provide the EPA with photos and a description of the corrective actions taken to address this finding.

Finding 4: Failure to conduct self-monitoring for the discharge event in March 2021.

According to the facility representative, Cell A was drained in March 2021 and a discharge from the WWTF occurred, but no samples were collected. The DMRs for March 2021 were incorrectly submitted with No Discharge Indicator Code (NODI) C (No Discharge) for Outfalls 001A, 002A, and 003A.

On July 29, 2021, the March 2021 DMR for Outfall 001A was corrected and resubmitted with NODI code E (Analysis Not Conducted/No Sample). The facility corrected the DMRs and accurately reported the discharge event but failed to conduct the self-monitoring sample collection of the effluent.

Permit Requirements:

Part 3.2 of the Permit states, “Self-Monitoring Requirements: At a minimum, upon the effective date of this permit, the following constituents shall be monitored at the frequency and with the type of measurement indicated; samples or measurements shall be representative of the volume and nature of the monitored discharge. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report (DMR) Form (EPA No. 3320-1) that no discharge or overflow occurred.

3.2.1. Self-monitoring frequency for DISCHARGE facilities will be based upon their discharge regimen and will be specified in the facility authorization letter. Facilities will be assigned to one of the three reporting sub-categories; A – Monthly, B – Quarterly, C – Semi-annual, based on their discharge status.

The April 5, 2016, Authorization Letter from the EPA indicated that the Fort Washakie Hot Springs Lagoon WWTF was categorized as Subcategory A – Monthly Monitoring.

Findings, Corrective Actions, and Recommendations

Effluent Characteristic	Frequency	Sample Type a/
Flow, MGD b/	Weekly	Instantaneous
5-day Biochemical Oxygen Demand (BOD ₅), mg/L	Monthly	Grab
pH, standard units	Weekly	Instantaneous
Total Suspended Solids (TSS), mg/L	Monthly	Grab
Total Ammonia Nitrogen (as N) d/	Monthly	Grab
<i>Escherichia coli</i> , colonies/100 mL	Monthly	Grab
Total Nitrogen (N), mg/L	Monthly	Grab
Total Phosphorus (P), mg/L	Monthly	Grab
Oil and Grease, Visual	Weekly	Observation
Oil and Grease, mg/L e/	e/	Grab

a/ See Definitions, Part 8, for definition of terms in the permit.

b/ Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained. The average flow rate (in gallons per day) during the reporting period and the daily maximum flow (maximum volume discharged during a 24-hour period) shall be reported. Alternately, for facilities that do not have fixed flow measurement devices in place, flow may be estimated by performing calculations based on; the dimensions of the lagoon, discharge rate, length of discharge and depth markers.

d/ Ammonia monitoring is required for all discharges under the lagoon general permit. Ammonia monitoring data will be utilized to assess if water quality effects on streams require future limitations on ammonia to protect aquatic life. Receiving water temperature and pH must be taken concurrently with discharge.

e/ In the event that an oil sheen or floating oil is observed in the discharge, a grab sample shall be taken immediately and analyzed in accordance with the requirements of 40 C.F.R. Part 136. If no grab sample was taken during the reporting period because no visible sheen was observed, enter "No grab sample required this reporting period." or similar verbiage on the appropriate line of the DMR form."

Corrective Action:

Ensure that all required self-monitoring is conducted during discharge events. Provide the EPA with a description of the corrective actions taken to address this finding.

Finding 5: Buffer solution (pH 10) used for calibration of the pH meter was expired.

Prior to the onsite inspection at the WWTF, inspectors viewed information at the WTP and laboratory. Inspectors noted that the pH 10 buffer solution, used to calibrate the pH meter, expired in March 2021. The pH 4 and pH 7 buffer solutions were within the expiration timeframes. The same pH probe and buffer solutions were used for the WTP and the WWTF.

Permit Requirements:

Part 5.2 of the Permit states, "Monitoring Procedures. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit."

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

Findings, Corrective Actions, and Recommendations

Corrective Action:

Ensure the pH buffer solutions for the pH meter calibration are not expired. Provide the EPA with a description of the corrective actions taken to address this finding.

Finding 6: The facility exceeded the effluent limitations for BOD, TSS, and pH in March 2020, April 2020, and June 2021. Additionally, reporting errors for pH and 7-day average values were noted.

Inspectors reviewed the March 2020 and April 2020 DMRs and laboratory analytical reports. Additionally, the DMR data reported to the EPA through the NetDMR system was reviewed from January 2020 - June 2021. Inspectors noted the following effluent exceedances:

DMR	Outfall	Parameter	Reported Exceedance	Permit Limit Exceeded
March 2020	Outfall 002A	BOD	40 mg/l	30-day average limit (30 mg/l)
March 2020	Outfall 003A	BOD	43 mg/l	30-day average limit (30 mg/l)
April 2020	Outfall 001A	TSS	40.9 mg/l	30-day average limit (30 mg/l)
April 2020	Outfall 001A	pH	9.21 on 4/15/20 9.19 on 4/23/20 9.12 on 4/28/20	pH greater than 9.0
June 2021	Outfall 001A	BOD	36 mg/l	30-day average limit (30 mg/l)
June 2021	Outfall 001A	TSS	67 mg/l	30-day average limit (30 mg/l) 7-day average limit (45 mg/l)

Additionally, the following reporting errors were noted in the DMRs:

- On the March 2020 DMRs for Outfalls 002A and 003A, the pH value matched the laboratory pH data; pH of 7.29 for Outfall 002A and pH of 7.28 for Outfall 003A. No field pH data was collected on the date of sample collection (March 25, 2020). In the field log, a pH of 8.04 was recorded on March 26, 2020, but there is no information on where the sample was collected. 40 CFR Part 136 requires that pH samples be analyzed within 15 minutes of collection and the laboratory data exceeded the holding time for pH analysis.
- On the April 2020 DMR for Outfall 001A, the laboratory report for the samples collected on April 15, 2020 indicated a TSS concentration of 40.9 mg/l; however, 10.9 mg/l was reported for the 7-day average on the DMR.

Permit Requirements:

Part 3.1 of the Permit states, "Effluent Limitations: Effective immediately and lasting through the life of this permit, the quality of effluent discharged by the facility shall, at a minimum, meet the limitations as set forth below:

TABLE 1
Effluent Limitations for DISCHARGE Facilities

Effluent Characteristic	30-Day Average	7-Day Average	Daily Maximum
5-day Biochemical Oxygen Demand (BOD ₅), mg/L	30	45	N/A

Findings, Corrective Actions, and Recommendations

Total Suspended Solids (TSS), mg/L	30	45	N/A
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The pH of the effluent shall not be less than 6.5 nor greater than 9.0 in any single sample or analysis.

The concentration of oil and grease in any single sample shall not exceed 10 mg/L nor shall there be any visible sheen in the receiving water or adjoining shoreline.”

Part 5.2 of the Permit states, “Monitoring Procedures. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.”

40 CFR Part 136 requires that pH samples be analyzed within 15 minutes of collection.

Corrective Action:

Ensure the WWTF is being operated in such a manner to meet effluent limitations. Ensure that pH samples are sampled within 15 minutes of collection in accordance with the test procedures approved under 40 CFR Part 136. Accurately calculate and report the 7-day average values on the DMRs. Provide the EPA with a description of the corrective actions taken to address this finding and of how the facility will meet the effluent limitations in the future.

Finding 7: The facility failed to report the BOD, TSS, and pH permit limit exceedances in March 2020 and April 2020.

The Permit contains reporting requirements for violations of discharge limitations. Effluent exceedances of BOD in March 2020, and exceedances of TSS and pH in April 2020 were not reported to the EPA within 24 hours of the facility becoming aware of the circumstances and did not provide the EPA with the written submission within five days.

For the June 29, 2021 sampling, Mr. Martin notified EPA via email on July 28, 2021 of an effluent exceedance of 30-day average limit for BOD, and 30-day average and 7-day average limits for TSS at Outfall 001A.

Permit Requirements:

Part 5.8.2 of the Permit states, “The following occurrences of noncompliance shall be reported by telephone to the EPA, Region 8, NPDES Enforcement Unit at (800) 227-8917 (8:00 a.m. - 4:30 p.m. Mountain Time) and the applicable Tribe (see Appendix A for list of Tribes and telephone numbers) (8:00 a.m. - 4:30 p.m. local time) by the first workday following the day the permittee became aware of the circumstances:

5.8.2.1. Any unanticipated bypass which exceeds any effluent limitation in the permit (See Part 6.7, Bypass of Treatment Facilities.);

5.8.2.2. Any unauthorized release, including sanitary sewer overflows;

5.8.2.3. Any upset which exceeds any effluent limitation in the permit (See Part 6.8, Upset Conditions.); or,

5.8.2.4. Any violation of a discharge limitation for any of the pollutants listed in the permit to be

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reported within 24 hours.

5.8.3. A written submission shall also be provided to the EPA and to the applicable Tribe within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

5.8.3.1. A description of the noncompliance and its cause;

5.8.3.2. The period of noncompliance, including exact dates and times;

5.8.3.3. The estimated time noncompliance is expected to continue if it has not been corrected; and,

5.8.3.4. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

Corrective Action:

Ensure that permit exceedances are reported to the EPA within 24 hours of becoming aware of the violation. Also, ensure that follow-up reports are submitted to the EPA within five days of becoming aware of the violation. Effluent violations from the June 2021 sampling were reported to EPA, as required by the permit. No additional response to the EPA is requested pursuant to this recommendation.

Finding 8: The number of samples was entered into the “# of Ex.” (Number of Exceedances) column in the DMR form.

During the records review, inspectors and Mr. Martin discussed DMR forms. The facility was entering the number of samples collected in the column labeled “# of Ex.” The “# of Ex.” column represents the number of exceedances, or effluent violations, reported by the facility, rather than number of samples. On future DMRs, Mr. Martin will be entering the number of exceedances in this column.

Permit Requirements:

Part 5.4.4.1 of the Permit states, “Electronic submission of discharge monitoring reports: NPDES permittees required to submit DMRs may use NetDMR after requesting and receiving permission from the EPA. After the EPA has approved the facility’s request, the NetDMR tool enables permittees to complete their DMRs via a secure Internet connection. For more information on getting started, please visit; https://netdmr.epa.gov/netdmr/public/getting_started.htm.”

Corrective Action:

Enter the appropriate number of exceedances in the “# of Ex” column of the DMR form. No response to the EPA is requested pursuant to this finding.

Finding 9: No visible signs were posted on the fence or gate to warn the public. Manholes and splitter boxes were left open, even when operators were not onsite.

During the onsite inspection, the WWTF was fenced but there was no sign on the gate to warn the public. Inspectors noted that all manholes and splitter boxes within the lagoon system were left open, even when operators were not onsite.

EPA Guidance:

The EPA has developed guidance manuals on the proper operation and maintenance of lagoons. One of the guidance materials is called “Principles of Design and Operations of Wastewater Treatment Pond Systems for Plant Operators, Engineers, and Managers” (August 2011, EPA/600/R-11/088).

<https://www.epa.gov/sites/production/files/2014-09/documents/lagoon-pond-treatment-2011.pdf>

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This guidance manual indicates in Chapter 9 (Operation and Maintenance), on page 9-20 that: “To discourage use of the ponds for recreation, the entire area should be fenced and warning signs displayed.”

Recommendation:

The EPA recommends the posting of warning signs at the lagoon and ensuring the fences are maintained to prevent unauthorized access and entrance by wildlife. No response to the EPA is requested pursuant to this recommendation.

Finding 10: There was no O&M manual maintained for the lagoon system.

During the inspection, Mr. Martin indicated that the O&M manual for the WWTF may be with the engineer working on the lagoon upgrades; the O&M manual has not been provided to the EPA

EPA Guidance:

The EPA has developed guidance manuals on the proper operation and maintenance of lagoons. One of the guidance materials is called “Principles of Design and Operations of Wastewater Treatment Pond Systems for Plant Operators, Engineers, and Managers” (August 2011, EPA/600/R-11/088), available at <https://www.epa.gov/sites/production/files/2014-09/documents/lagoon-pond-treatment-2011.pdf>.

Recommendation:

The EPA recommends an operation and maintenance manual be developed for the facility. No response to the EPA is requested pursuant to this recommendation.