

NPDES Inspection Report – Wastewater Treatment Facility

National Database Information	
Inspection Date: August 20, 2024	Inspection Type: CEI – Wastewater Treatment Facility
Entry/Exit Time: Opening Conference: 9:15 a.m.-1:30 p.m. on 8/19/2024 Site Review: 12:56 p.m.-1:33 p.m. on 8/20/2024	NPDES ID Number: SDG589505
NAICS Code: 221320	Inspection ID: 202408_SDG589505
Lead inspector and affiliation: Brit Rustad / EPA Region 8	
Inspector and affiliation: Jennifer Ferrando / EPA Region 8	

Facility Location Information	
Site/Facility Name & Location: Martin Sunrise Housing Wastewater Treatment Facility Lat/Long: 43° 10' 0.63" N, 101° 42' 20.05" W (lagoon) Apple Lane, Sunrise Housing, Martin, SD 57551	Email Report to: Ernie Abold, Director, Oglala Sioux Tribe (OST) Water & Sewer h2osewer@gwtc.net

Contact Information	
	Name(s)/Title
Facility Contacts:	Ernie Abold / Director / OST Water & Sewer / present during the opening and closing conferences as well as the inspection
	James Begeman / Tribal Utility Consultant / Indian Health Service (IHS) / present during the opening and closing conferences as well as the inspection
Person/Company meeting definition of "Operator"	Oglala Sioux Tribe, Water and Sewer (OST Water & Sewer)
Authorized Official(s)	Ernie Abold / Director / OST Water & Sewer

Permit Information		
Is the permit on site and available? Yes, digitally	Lagoon Category: Discharge. Sub-category C, according to the authorization of coverage letter.	Monitoring Frequency: Semi Annual for effluent and receiving stream with quarterly influent monitoring
Effective Date: 05/01/2023	Expiration Date: 3/31/2027	Is the Facility under a compliance schedule? No
Is correct contact information indicated on ICIS? Yes	Indicate correct contact information: N/A	
Receiving Water(s): unnamed tributary of the Little White River		
Regulatory Inspector's source of information: Notice of Intent for the permit, ICIS, ECHO and facility representatives		

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>	Laboratory	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	Draft Date	Contact Information
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Management Reviewer Name/Signature/Date		Contact Information
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Emilio Llamozas, NPDES and Wetlands Enforcement Section Supervisor		

Inspection Narrative and Site Description
<u>1.0 Introduction</u> The inspection was conducted at the Martin Sunrise Housing wastewater treatment facility (facility; WWTF) located in Bennett County, South Dakota, 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 South Dakota. The inspection was announced approximately one month prior to the inspection to coordinate logistics for the inspection. On the morning of August 19, 2024, U.S. Environmental Protection Agency (EPA) inspectors Brit Rustad and Jennifer Ferrando (collectively, "we") met with Oglala Sioux Tribe, Water & Sewer (OST Water & Sewer) Director, Ernie Abold. We were also joined by Indian Health Service (IHS) representative James Begeman, Tribal Utility Consultant. We presented our credentials and had an

opening conference in the OST Water & Sewer office where we explained the purpose of the inspection and discussed the design, operation, and Clean Water Act and NPDES compliance of multiple WWTFs operated by the OST Water & Sewer, including the subject facility. After the opening conference, we proceeded to conduct site reviews of the WWTFs operated by OST Water & Sewer, including the subject facility, for the remainder of August 19, 2024, through August 22, 2024. Throughout the inspection, we noted our observations in a checklist. Photographs taken during the inspection are included in the attached photo log.

2.0 OST Water & Sewer Operations

During the opening conference when discussing all facilities, Ernie Abold indicated that over the course of a week all WWTFs, including four lift stations, are checked. OST Water & Sewer is not keeping weekly inspection logs for these checks or any operations or maintenance logs. Only two of the four lift stations currently have Supervisory Control and Data Acquisition (SCADA) capabilities, which creates a burden for the limited staff to physically go check the two remaining lift stations several times per week to ensure they are operating properly. Ernie Abold stated that OST Water & Sewer performs jetting of the collection system for all WWTFs twice a year, in the spring and fall. Lastly, sludge has not been removed from any WWTFs; according to the tribal utility consultant, sludge accumulation has not been an issue with any of the lagoons on Pine Ridge based on previous depth testing and observations.

OST Water & Sewer operates both the water distribution as well as sewer collections systems across the Pine Ridge Reservation, which encompasses just over 2 million acres. According to Ernie Abold there are approximately 48,000 tribal members with half of these being served by the sewer collections system and the other half being primarily on septic systems. Septage from the majority of these septic systems is pumped and hauled to OST Water & Sewer's WWTFs throughout the reservation. At the time of the inspection, OST Water & Sewer employed 3 operators, in addition to the Director, and various managerial and administrative support staff. Only one of the three operators held any certifications.

OST Water & Sewer customers, rates, and finances were briefly discussed during the opening conference. Users are billed a single, monthly water and wastewater fee. Ernie Abold stated that OST Water & Sewer's budget is not supplemented by any other resources. OST Water & Sewer recently began a 5-year rate increase, as the last rate increase was in 2009. Additionally, according to the OST Water & Sewer representative, the utility is owed over \$1 million in outstanding user fees. This is in part a result of OST Water & Sewer's limited ability to discontinue service for customers who do not pay their bill.

3.0 Facility Description and Site Review

The facility is permitted as a discharge facility under the EPA Region 8 General Permit for Wastewater Lagoon Systems in Indian Country in South Dakota (Permit). According to the facility's Notice of Intent (NOI) for Permit coverage, and confirmed during the opening conference, the facility serves

roughly 340 people in the Sunrise Housing community. The system was originally built with 2 cells in 1971. The system was expanded in 1992 with the two original cells being combined and two additional cells being added for a total of 3 current cells.

When we arrived at the facility the gate was open and appeared to be broken. A sign was clearly visible next to the entrance (photo 1). Before entering through the gate, we noticed septage leading from the lagoon out onto the access road (photo 2). It appeared that septage haulers were getting progressively farther from the lagoon each time they dumped. We proceeded to walk around cells 1-3 of the lagoon to evaluate berm integrity, vegetation, and the facility's discharge status. Vegetation and cattails had reached a height greater than six inches in all areas around cells 1-3 (photos 3-5). Many trees were also noted throughout the lagoon on the inside slope and top of berms (photos 4-5). Cell 3 had a much darker green/ pea soup color as opposed to cells 1-2 (photo 5). One of the caps to the transfer valve between cells 2 and 3 was missing (photo 6). Lastly, the outfall could be seen outside the perimeter fence down slope of cell 3 (photo 7).

At the end of our inspections of OST Water & Sewer-operated WWTFs on August 22, 2024, we held a brief closing conference with Ernie Abold and James Begeman where we discussed preliminary findings. The following week on August 29, 2024, the EPA sent an email to Ernie Abold with the preliminary findings from the inspection and resources for documenting inspections, a lagoon troubleshooting guide, and a lift station standard operating procedures template.

Findings, Corrective Actions and Recommendations

Finding #1: The Permittee was not documenting weekly lagoon inspections.

The facility representative stated that OST Water & Sewer staff visit each lagoon and lift station weekly, but did not maintain records of the inspections. The inspectors provided the facility representatives with a lagoon inspection report template form (Appendix D of the Permit) that the facility representatives could use to document the weekly lagoon inspections.

Permit requirement:

Part 6.5.1 of the Permit states, "On at least a weekly basis, unless otherwise modified by written approval from EPA, the Permittee shall inspect its wastewater treatment facility. Permission for less frequent inspections must be requested in writing by the Permittee and may be granted on a case-by-case basis where appropriate (e.g. a lagoon located in a remote area where access is a problem during the winter and compliance issues are not present), at the discretion of EPA. The Permittee shall maintain a notebook/logbook recording all information obtained during the inspection using indelible ink pens (or inspection logs may be kept in electronic format in accordance with proper record-keeping procedures) and in sufficient detail so that decision logic may be traced back, once reviewed. At a minimum, the notebook/logbook shall include the following (see Appendix D of this Permit for an Example Lagoon Inspection Form):

6.5.1.1. Name of facility and permit number;

6.5.1.2. Date and time of the inspection;

6.5.1.3. Name of the inspector(s);

- 6.5.1.4. The facility's discharge status;
- 6.5.1.5. The flow rate of the discharge, if occurring;
- 6.5.1.6. Determine if a discharge is occurring, has occurred since the previous inspection, and/or if a discharge is likely to occur before the next inspection. (Note: If a discharge has occurred or is likely to occur before the next inspection, perform the appropriate monitoring and reporting requirements in Sections 3 and 5.4 of this Permit if not already done.);
- 6.5.1.7. If there is any leakage through the dikes;
- 6.5.1.8. If there are any animal burrows in the dike;
- 6.5.1.9. If there is any erosion of the dikes (e.g., rills, cracks or other structural indications of erosion);
- 6.5.1.10. If there are any rooted plants, including weeds or trees growing in the water;
- 6.5.1.11. If the vegetative growth on the dikes need mowing (i.e. no greater than 6" tall or any height that may interfere with monitoring, operation and maintenance of the system);
- 6.5.1.12. Visual observation for visible sheen, floating oil, floating solids and foam;
- 6.5.1.13. Visual observation to check for evidence of illicit septic dumping;
- 6.5.1.14. List the date scheduled for operation and maintenance procedures to be undertaken at the wastewater treatment facility;
- 6.5.1.15. Identification of operational and/or maintenance problems, and a determination of whether proper operation and maintenance procedures are being undertaken at the frequency necessary to maintain working operations and the overall treatment and collection systems of the wastewater treatment lagoon system;
- 6.5.1.16. Recommendations, as appropriate, to remedy identified problems;
- 6.5.1.17. A brief description of any actions taken with regard to problems identified;
- 6.5.1.18. Overall visual observations to identify potential concerns with the "health" of the lagoon system (e.g., water is cloudy, water coloration concerns (e.g. red, black, grey, dark blue-green and cloudy), etc.); and
- 6.5.1.19. Other information, problems identified, or observations, as appropriate.

The Permittee shall maintain the notebook/logbook in accordance with required record-keeping items listed above and shall make the log available for inspection, upon request, by authorized representatives of the U.S. Environmental Protection Agency or the applicable Tribe(s) (see Appendix A for list of Tribes).

Problems identified during the inspection (including, but not limited to, those associated with this section of the Permit) shall be corrected at the time of inspection, if possible. If they cannot be corrected at the time of the inspection, the inspector must identify a corrective action to remedy the problem(s), as well as a timeline for completion of the remedy. Corrective actions to remedy problem(s) shall be in line with (and addressed through) proper operation and maintenance (Section 6.6 of this Permit.). All problems identified during inspections, as well as associated corrective actions and timelines, shall be documented in the inspection log."

Part 5.9 of the permit states, "The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Permit, and records of all data used to complete the application for the Permit, for a period of at least three years from the date of the sample, measurement, report or application. Records of monitoring required by the Permit related to

sludge use and disposal activities must be kept at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the EPA at any time. Data collected on site, data used to prepare the DMR, copies of DMRs, and a copy of this NPDES Permit must be maintained on site.”

Corrective Action:

Ensure that lagoon inspections are conducted on a weekly basis and documented in accordance with the permit. Ensure that weekly lagoon inspection reports are retained in accordance with the recordkeeping requirements of the permit. Provide the EPA and the Oglala Sioux Tribe Environmental Department with 1 month’s worth of weekly inspection reports.

Finding #2: No O&M manuals or logs were available.

The Permittee did not have copies of operations and maintenance (O&M) manuals for the lagoon and were not properly tracking O&M activities.

Permit requirement:

Part 6.6.1 of the Permit states, “For Permittees not previously covered under the Region 8 General Permit for Wastewater Lagoon Systems in Indian Country, the Permittee shall, as soon as reasonable and practicable, but no later than six (6) months after the effective date of this Permit, do the following as part of the operation and maintenance program for the wastewater treatment facility:

6.6.1.1. Have a current O & M Manual(s) that describes the proper operational procedures and maintenance requirements of the wastewater treatment facility;

6.6.1.2. Have the O & M Manual(s) readily available to the operator of the wastewater treatment facility and require that the operator become familiar with the manual(s) and any updates;

6.6.1.3. Have a schedule(s) for routine operation and maintenance activities at the wastewater treatment facility; and,

6.6.1.4. Require the operator to perform the routine operation and maintenance requirements in accordance with the schedule(s).

For Permittees renewing coverage under this Permit, the Permittee is expected to have the above listed items (Sections 6.6.1.1. thru 6.6.1.4., which were part of the requirements under the previous Region 8 General Permit for Wastewater Lagoon Systems in Indian Country) completed prior to the coverage date under this Permit. These Permittees shall ensure that each of the items listed above are updated and maintained as part of the operation and maintenance program for the wastewater treatment facility.

In addition to the operation and maintenance items in the manual for the lagoon system, ALL Permittees shall do the following maintenance, at a minimum:

The Permittee shall maintain a log in either paper (e.g. bound notebook) or electronic format containing a summary record of any daily operation and maintenance activities at the wastewater treatment lagoon facility and collection system, that is to be updated on each day operation and maintenance activities are performed. At a minimum, the log shall include the following information:

6.6.1.5. Date and time;

6.6.1.6. Name and title of person(s) making the log entry;

- 6.6.1.7. Name of the persons(s) performing the activity;
- 6.6.1.8. A brief description of any operations and maintenance activity performed on the wastewater treatment lagoon system;
- 6.6.1.9. The Permittee shall ensure that necessary action to promptly correct the problem of leakage through the dikes is taken and documented in the maintenance log;
- 6.6.1.10. The Permittee shall ensure that necessary action to promptly remove burrowing animals from the dikes is taken and documented in the maintenance log;
- 6.6.1.11. The Permittee shall ensure prompt repair of damage to dikes caused by burrowing animals and/or erosion and documentation of all actions in the maintenance log;
- 6.6.1.12. The Permittee shall ensure removal of rooted plants, including weeds and trees, from the water on a regular basis or as needed and documentation of all actions in the maintenance log; and
- 6.6.1.13. The Permittee shall ensure that the dikes are kept mowed on a regular basis during the growing season or as needed (i.e., vegetation not greater than 6" tall or any height that may interfere with monitoring, operation and maintenance of the system) and that documentation of all actions taken are recorded in the maintenance log.
- 6.6.1.14. Other information, as appropriate."

Corrective Action:

Implement an operations and maintenance program including developing an O&M manual in accordance with the permit. Maintain maintenance logs in accordance with the recordkeeping requirements of the permit. Provide the EPA and the Oglala Sioux Tribe Environmental Department with a description of the corrective actions taken to address this finding as well as relevant O&M documents from sections 6.6.1.1. through 6.6.1.4.

Finding #3: Excessive vegetation and trees were evident throughout the cells.

Vegetation, cattails and trees had reached greater than six inches in height on the inside of all cells and on the berms of cells 1-3 (photos 3-5).

Permit requirement:

Part 6.6 of the Permit 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 this Permit.

The Permittee shall do the following as part of the operation and maintenance program for the wastewater treatment facility...

- 6.6.1.10. The Permittee shall ensure that necessary action to promptly remove burrowing animals from the dikes is taken and documented in the maintenance log;
- 6.6.1.11. The Permittee shall ensure prompt repair of damage to dikes caused by burrowing animals and/or erosion and documentation of all actions in the maintenance log;

6.6.1.12. The Permittee shall ensure removal of rooted plants, including weeds and trees, from the water on a regular basis or as needed and documentation of all actions in the maintenance log; and 6.6.1.13. The Permittee shall ensure that the dikes are kept mowed on a regular basis during the growing season or as needed (i.e., vegetation not greater than 6" tall or any height that may interfere with monitoring, operation and maintenance of the system) and that documentation of all actions taken are recorded in the maintenance log..."

Corrective Action:

Remove the overgrown vegetation and trees on the inside and around the berms in all cells in accordance with Part 6.6 and relevant subparts of the Permit. Submit to the EPA and the Oglala Sioux Tribe Environmental Department photos once the vegetation and trees have been removed.

Finding #4: DMRs have not been submitted for several reporting periods.

According to the authorization of coverage letter, the facility is covered under Discharge Sub-category C, which requires semiannual reporting. The Permittee had not submitted DMRs for the effluent monitoring periods listed below at the time of the inspection and as a result the Permittee was in significant noncompliance (SNC) status for failing to submit DMRs.

The following DMRs were missing:

1. The DMR for outfall 001-C for the monitoring period from July 1, 2023, to December 31, 2023, which was due on January 28, 2024.
2. The DMR for outfall 001-C for the monitoring period from January 1, 2024, to June 30, 2024, which was due on July 28, 2024.

Permit requirement:

Part 5.4.1 of the Permit states, "For discharge facilities, the effluent monitoring results obtained during the previous month, calendar quarter, or semi-annual period, shall be summarized and reported via the NetDMR reporting system by the DMR by no later than the 28th day of the month following the completed reporting period, or on a Discharge Monitoring Report (DMR) Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period (see example schedules in table below). If no discharge occurs during the reporting period, it shall be reported as "no discharge" in the NetDMR reporting system. If there is no discharge, no flow or access was impeded by snow, ice, flooding, other unsafe conditions, etc.; the information shall be reported on the DMR using the applicable NetDMR no data indicator code (i.e., NODI code), to identify the circumstances of the situation. If the DMR Form (EPA No. 3320-1) is used, "no discharge" shall be indicated on the form if no discharge occurs. See example reporting schedules in Table 9, below."

Table 9. Reporting Requirements

Sub-Category	Frequency of Discharge	Reporting Period	DMR Due Date
A	Continuous discharge or frequency of at least once a month	Monthly (e.g. January)	28 th day of the following month (February 28 th)
B	Less frequently than monthly but at least once a quarter	Quarterly (e.g. April – June)	28 th day following the end of the quarter (July 28 th)
C	Less than quarterly	Semi-annually (e.g. July – December)	28 th day following the end of 6 th month period (January 28 th)

Corrective Action:

Submit all DMRs that are past due and provide evidence that these DMRs have been submitted in a response to this report. Ensure that all DMRs are submitted in a timely manner in accordance with Part 5.4.1 of the Permit.

EPA checked NetDMR on 8/29/2024 and notes that past DMRs were updated on 8/27/2024 using NODI code C, indicating that no discharge occurred during those reporting periods. No further action is required for this finding.

Finding #5: The Permittee was not conducting influent monitoring.

The required influent monitoring was not being conducted per the permit. According to the authorization of coverage letter, the facility is covered under Discharge Sub-category C, which requires quarterly influent monitoring.

Permit requirement:

Part 3.1.2 of the Permit states, “...

Table 4. Baseline Influent Monitoring Requirements

Influent Characteristic	Sub-category A Frequency b/	Sub-category B Frequency b/	Sub-category C Frequency b/	Sample Type a/
BOD5, mg/L	Monthly	Twice per Quarter c/	Quarterly, d/	Grab
TSS, mg/L	Monthly	Twice per Quarter c/	Quarterly, d/	Grab

a/ See Definitions, Section 1.1. of this Permit, for definition of terms.

b/ See Section VI. Monitoring Requirements of the Fact Sheet and Section 3.1.4. of this Permit, for additional information on the discharging sub-categories. A Permittee's sub-category will be clearly identified in the authorization of coverage letter.

c/ At least two samples will be taken each calendar quarter and will be used in the calculation for the 30-day averages for the month in which they are performed. Samples are to be taken during different months within the quarter to provide information for possible variations in influent that may occur during the quarter. Additional samples may be taken at the Permittee's discretion if a large amount of variability is anticipated in the influent within a quarter. Any additional sample results must be included in the 30-day average influent DMR reporting for the month in which it is performed. If only

one sample is taken within a month, that result will be the 30-average for the month.

d/ A sample will be taken at least once each calendar quarter and will be used in the calculation for the 30-day averages for the month in which they are performed. Additional samples may be taken at the Permittee's discretion if a large amount of variability is anticipated in the influent within a quarter. Any additional sample results must be included in the 30-day average influent DMR reporting for the month in which it is performed. If only one sample is taken within a month, that result will be the 30-average for the month."

Part 3.1.4.3 of the Permit states, "...Influent monitoring sampling will consist of a single grab sample at a location representative of the influent flow entering the wastewater lagoon treatment system prior to treatment (e.g. an influent structure, upstream manhole that contains flow from the entire service area, or any other representative location), unless otherwise indicated in the facility's permit coverage letter. Influent sample monitoring shall be required quarterly to allow characterization of influent flow with regard to BOD5, TSS, and flow, and calculation of BOD5 and TSS percent removal values."

Corrective Action:

Monitor the influent for appropriate characteristics, frequency, and sample type specified in the Permit. Additionally, monitor the receiving stream per the permit requirements if/ when a discharge occurs. Provide the EPA and the Oglala Sioux Tribe Environmental Department with a response indicating how the facility will implement influent monitoring as required by the Permit as well as documentation proving that the next quarterly influent sample has been gathered and analyzed per permit requirements.

Finding #6: Septage haulers were not backing up to the lagoon.

Septage was observed on the ground leading from the lagoon out onto the access road (photo 2). It appeared that septage haulers were getting progressively farther from the lagoon each time they dumped. This may have been due to the excess vegetation near the edge of the lagoon, preventing trucks from getting closer.

Permit requirement:

Part 6.6 of the Permit 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 this Permit..."

6.6.1.13. The Permittee shall ensure that the dikes are kept mowed on a regular basis during the growing season or as needed (i.e., vegetation not greater than 6" tall or any height that may interfere with monitoring, operation and maintenance of the system) and that documentation of all actions taken are recorded in the maintenance log."

Recommendation:

Cut down vegetation at the septage dumping station so that trucks can get closer to the lagoon to dump septage. Additionally, ensure that dumping is not causing erosion at the edge of the berm.

Finding #7: The gate to the lagoon was open.

The gate was open and appeared to be broken when we arrived at the facility (photo 1). The lock was also missing.

EPA Guidance:

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>

This guidance manual indicates on page 9-20 that:

"To discourage use of the ponds for recreation, the entire area should be fenced and warning signs displayed."

Permit requirement:

Part 6.6 of the Permit 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 this Permit."

Recommendation:

Ensure the lagoon gate is maintained and locked to prevent unauthorized access and entrance. EPA recommends providing a combination key to septage haulers that are authorized by the OST Water & Sewer to discharge septage to the facility so that they can access the lagoon without breaking the lock or chain.

Finding #8: The Permittee was not calibrating the pH meter.

The facility representative stated that the pH meter that is used to measure the effluent and receiving water pH had never been calibrated.

Permit requirement:

Part 5.9 of the Permit states, "The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Permit, and records of all data used

to complete the application for the Permit, for a period of at least three years from the date of the sample, measurement, report or application.”

Corrective Action:

Ensure the pH meter is calibrated in accordance with the manufacturer’s recommendations using current (un-expired) buffer solutions before the meter is used for effluent monitoring in accordance with the Permit requirements. Retain calibration records, in accordance with requirements of the Permit. Provide the EPA and the Oglala Sioux Tribe Environmental Department with a description of the corrective actions taken to address this finding, including a copy of the procedures that will be followed to calibrate the meter and an example log sheet that will be used to document the calibration.

Finding #9: Facility does not have enough staff or funding.

During the opening conference, staffing and funding resources were discussed. It is apparent based on that conversation as well as field observations that this facility does not have adequate staff or funding to fully comply with the permit.

Permit requirement:

Part 6.6.2 of the Permit states, “Staffing and Funding: The Permittee shall provide adequate staff and funding to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this Permit. The level of staffing needed, in numbers, training and experience, shall be determined taking into account the work involved in operating the system, conducting maintenance, and complying with this Permit.”

Corrective Action:

Develop a staffing and funding plan (plan) that includes the number of staff needed to comply with the permit, staff retention plan (competitive pay and proper training), SOPs for collection of outstanding fees, and evaluation of alternative funding sources. The plan should include deadlines for accomplishing each of the items listed in the plan. Provide the EPA and the Oglala Sioux Tribe Environmental Department with a copy of the plan.

Finding #10: Excessive algae growth in cell 3.

Cell 3 was a very dark green/ pea soup color (photo 5) which may indicate there is an overabundance of microscopic and/or blue-green lagoon algae (cyanobacteria). This may indicate low pH and low lagoon dissolved oxygen (DO), and may cause high Total Suspended Solids (TSS) in the effluent.

Permit requirement:

Part 6.5.1 of the permit states, “On at least a weekly basis, unless otherwise modified by written approval from EPA, the Permittee shall inspect its wastewater treatment facility. Permission for less frequent inspections must be requested in writing by the Permittee and may be granted on a case-by-case basis where appropriate (e.g. a lagoon located in a remote area where access is a problem during the winter and compliance issues are not present), at the discretion of EPA. The Permittee shall maintain a notebook/logbook recording all information obtained during the inspection using

indelible ink pens (or inspection logs may be kept in electronic format in accordance with proper record-keeping procedures) and in sufficient detail so that decision logic may be traced back, once reviewed. At a minimum, the notebook/logbook shall include the following (see Appendix D of this Permit for an Example Lagoon Inspection Form):

...6.5.1.18. Overall visual observations to identify potential concerns with the “health” of the lagoon system (e.g., water is cloudy, water coloration concerns (e.g. red, black, grey, dark blue-green and cloudy), etc.); and

6.5.1.19. Other information, problems identified, or observations, as appropriate.

...Problems identified during the inspection (including, but not limited to, those associated with this section of the Permit) shall be corrected at the time of inspection, if possible. If they cannot be corrected at the time of the inspection, the inspector must identify a corrective action to remedy the problem(s), as well as a timeline for completion of the remedy. Corrective actions to remedy problem(s) shall be in line with (and addressed through) proper operation and maintenance (Section 6.6 of this Permit.). All problems identified during inspections, as well as associated corrective actions and timelines, shall be documented in the inspection log.”

Part 6.6 of the Permit 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 this Permit.”

Recommendation:

Ensure that the lagoon is functioning as designed by performing routine maintenance to manage the health of the system.