

INSPECTION REPORT

Inspection Date(s):	06/29/2022 - 06/29/2022	Announced: Yes
Time:	Entry: 09:15 AM (CT)	Exit: 02:30 PM (CT)
Media:	Water	
Statute(s)/Program(s):	Clean Water Act, NPDES, WWTP	
Type of inspection:	CEI - Compliance Evaluation Inspection	
Access:	Granted	
Permittee Name:	UPPER SIOUX COMMUNITY	
Facility or Site Name:	USC WASTEWATER TREATMENT FACILITY	
Facility/Site Physical Address:	UPPER SIOUX LNDIAN RESERVATION (Latitude: 44°45' N, Longitude: 95°29' W)	
(City, state, zip code)	GRANITE FALLS, MN 56241	
County:	YELLOW MEDICINE	
Facility GPS Coordinates:	44°45' N, 95°29' W	
Facility/Site Identifier:	110043182631	
Permit Number:	MN0075001	

Persons Participating in Inspection:

Title	Name	Phone	Email	Present at Opening Conf.	Present at Closing Conf.
Lead Inspector	Dean Maraldo	(312) 353-2098	Maraldo.Dean@epa.gov	Yes	Yes
Inspector	Matthew Schulte	(312) 886-2405	Schulte.Matthew@epa.gov	Yes	Yes
Inspector	Monica Dix	(312) 886-0650	dix.monica@epa.gov	Yes	Yes
Tribal Utility Consultant, IHS	Mike Termont, P.E.		michael.termont@ihs.gov	No	Yes
USC Director of Public Works	Matt Schommer	(320) 564-6335	matts@uppersiouxcommunity-nsn.gov	Yes	Yes

Lead Inspector:

Dean Maraldo	<i>[Signature]</i>	DINO MARALDO	Digitally signed by DINO MARALDO Date: 2022.07.05 09:37:40 -05'00'
	REGION 5	maraldo.dean@epa.gov	(312) 353-2098

Supervisor Review:

Ryan Bahr	<i>[Signature]</i>	Bahr, Ryan	Digitally signed by Bahr, Ryan Date: 2022.07.08 13:15:44 -05'00'
	REGION 5	bahr.ryan@epa.gov	

SECTION I – INTRODUCTION**Site Entry and Inspection Objectives**

NPDES inspection

I, Region 5 Lead Inspector, Dean Maraldo, arrived at the Upper Sioux Community (the “Site” or “Facility”), located at coordinates 44°45' N, 95°29' W, at 09:15 AM (CT) on 06/29/2022 for an announced inspection. Region 5 Inspectors Monica Dix and Matthew Schulte joined me for the inspection. I presented my credentials to Matt Schommer, the Director of Public Works (“Director”) and informed him that this was a Region 5 inspection to determine compliance with the Clean Water Act (CWA) and the National Pollutant Discharge Elimination System (NPDES) permit program. The inspection was conducted under the authority of the Federal CWA (Section 308). The table above identifies the attendees that participated in the inspection. This report is based on information supplied by Facility representatives, observations made by the Region 5 inspectors, and records and reports maintained by the permittee and the Region 5 inspectors, including: direct observations made by the Region 5 inspectors, photographs taken by Region 5 inspectors, physical evidence collected by the Region 5 inspectors, verbal or written statements made by or information supplied by Facility representatives (the permittee) during or subsequent to the on-site inspection, and materials, processes, data, photographs, or documents shown, demonstrated, or submitted to the Region 5 inspectors by Facility representatives during or subsequent to the on - site Inspection. In addition, information gathered prior to or subsequent to the inspection from a review of USEPA, State, and public records may be included in this report.

After opening introductions, we went over the inspection plan for the day. I asked if there were any questions. The Director had no questions.

Facility/Site Description

I began by asking about the Facility information provided in the latest published permit fact sheet (2012). The Director confirmed the following:

- Wastewater flows are pumped to the treatment facility from three lift stations.
- Raw screening removes large objects from the waste stream prior to the treatment units.
- Biological treatment is accomplished utilizing a membrane bioreactor process. This process consists of an extended aeration activated sludge basin followed by membrane filters.
- Prior to entering the membrane filtration tanks, fine screens remove any fibrous material which may damage the membranes.
- In addition to the membrane system, final clarifiers (2) designed to handle periods of high hydraulic load to the facility provide solids separation for a portion of the facility flow.
- Disinfection is accomplished utilizing ultraviolet disinfection.
- The average daily design flow is 63,445 gallons per day, the average wet weather design flow is 95,061 gallons per day, the peak design day flow is 107,531 gallons per day and the peak hourly design flow is 130,000 gallons per day.
- The effluent discharges through Outfall 001 to the Minnesota River (Latitude: 44°45' N, Longitude: 95°29'W).
- Collection system includes about 6 miles of sewer.

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Facility/Site Information

Responses below provided by the Director.

WWTP Approx. # of residents served	68 connections and approx. 150 residents
WWTP AverageDaily Flow	60-70k
Outfalls	001
Operation schedule	7am-3pm, plus weekend checkup, and on call holidays
Do you use in-house or contract out for laboratory analyses?	MVTL labs, in-house DO, pH.
Do you accept waste from septage haulers?	No
Is there currently any portion of the treatment train that is non-operational?	No
Are there any plans for renovation or additional equipment to allow for increased wastewater flow?	Yes, add pumps to EQ tank.
Name/Grade of Operator in Responsible Charge	Matt Schommer, Class D
Is a copy of the current permit onsite (40CFR122.41)?	Yes
Has a permit reapplication package been submitted to EPA? (40CFR122.21)	Yes

Inspection Units

Unit/Area	Description
DMR Review	Interview questions and observations
Other Non-DMR Reports	
Additional Monitoring	
Flow Measurement	
Self Monitoring	
Operations and Maintenance	
SSOs/CSOs	
Pretreatment	
Wastewater Treatment Plant Components	Physical inspection
Headworks	
Aeration Tanks	
Clarifiers	
Membrane bioreactor	
Ultraviolet (UV) Treatment System	
Final Outfall 001	

SECTION II – OBSERVATIONS

Observations may not be in sequential order.

Unit: Interview/DMR Review	Contains CBI: No
Observation #: DM1-OB-001	Date: 06/29/2022
<p>Reviewed chronic effluent limit exceedances:</p> <p>30 effluent limit exceedances were reported by the Facility from February 2018 to April 2022. According to the Director, TSS, Phosphorus, and Carbonaceous Biochemical Oxygen Demand (CBOD₅) violations may be due to a tear in MBR membrane. Assuming a tear, MBR filters scheduled for replacement this year. The Director hoping the new pumps might help with consistent flow.</p>	
<p>Document(s)</p> <p>1. Upper Sioux ELVs_20220627.pdf</p>	

Unit: Interview/Other Non-DMR Reports	Contains CBI: No
Observation #: DM1-OB-002	Date: 06/29/2022
<p>The permittee shall implement an Operation & Maintenance Plan (including O&M plan, treatment system map, PMP, asset inventory, OM&R budget), that was developed during the last permit term, which is available to EPA upon request, pursuant to Part I.B.3.a. Status of O&M Plan status report due Jan 31, each year until complete (Part I.B.3.b): The Director was not aware of status of O&M Plan, and will ask consultant (Bolton Menk Engineering) for status.</p>	

Unit: Interview/Additional Monitoring	Contains CBI: No
Observation #: DM1-OB-003	Date: 06/29/2022
<p>Additional Monitoring: pursuant to Permit Part I.B.8, the Facility shall monitor the discharge from Outfall 001 for the constituents Total Kjeldahl Nitrogen (TKN), Nitrate plus Nitrite Nitrogen, Oil and Grease, Total Dissolved Solids (TDS), and Ammonia (as N). Testing shall be conducted in January 2018, April 2019, July 2020 and October 2021 to represent seasonal changes. The Director said all additional monitoring is done and provided lab reports (attached). The lab reports show that the April 2019 monitoring event was actually conducted in May 2019, the July 2020 monitoring event was actually conducted in August 2021, and the October 2021 monitoring event was actually conducted in May 2022.</p>	
<p>Document(s)</p> <p>1. Additional Monitoring Lab Reports.pdf</p>	

Unit: Interview/Flow Measurement	Contains CBI: No
Observation #: DM1-OB-004	Date: 06/29/2022
<p>Are influent (if applicable) and effluent flow measuring device(s) professionally calibrated, at least once per year? (40CFR122.41(e)). The Director said mag meters are calibrated annually, and calibration records are kept. They also read influent flow levels using notch weir.</p>	

Unit: Interview/Self Monitoring	Contains CBI: No
Observation #: DM1-OB-005	Date: 06/29/2022
<p>The Director provided responses to following self monitoring questions:</p> <p>Are required composite samples flow proportioned? Yes</p> <p>Are composite samples cooled to <4°C to properly preserve them during the compositing period? (40CFR136): Believe so.</p> <p>Are all grab samples cooled with ice, gel packs or refrigerated to <6 o C from the time of collection until analysis including shipping time, if applicable? Yes, put in coolers with ice packs.</p> <p>Are all samples which require preservation properly preserved? (40CFR122.41(e),40CFR136. Yes, lab provides preservation for certain parameters.</p> <p>Describe pH and DO monitoring procedure? Use Hach probe upon collection of sample.</p> <p>I asked if pH/DO field sample collection and analysis times are recorded on data sheets. The Director said data sheets do not include collection and analysis times. I recommended they add columns to include sample collection time and analysis time for Ph and DO.</p>	

Unit: Interview/Operations and Maintenance	Contains CBI: No
Observation #: DM1-OB-006	Date: 06/29/2022
<p>The Director provided responses to following operations and maintenance questions:</p> <p>Are all treatment units operable? Yes</p> <p>On a regular basis, do operators monitor the key operating parameters, interpret the data in relation to the effluent quality and sludge settleability, and conducting the necessary adjustments to meet the limits of the Permit? Operators pull mixed liquor every other day or so, and at least once a week at MBR and aeration tank.</p> <p>Any Bypasses? No</p>	

Does the wastewater treatment facility have an alarm system for all essential equipment? SCADA at the plant, no lift stations on SCADA expect lift station 3 that alerts of alarm only. All lift stations have beacons. Lift stations running well.

Are alarms sent to qualified personnel who can respond immediately to remedy the problem? yes, call chain.

Are routine and preventive maintenance scheduled performed and recorded? Record scheduled maintenance to do list and list of what has been done.

Does the Facility maintain written procedures for responding to emergencies such as power failures, floods, fires, and other natural disasters? They follow police department procedures.

Is a logbook kept which documents all plant activities on a daily basis? Yes.

Does the Facility maintain an inventory of spare parts, either at the Facility or close by, sufficient to keep all of its treatment units operational? Yes, but not kept up to date.

Does the Facility have standby power for all treatment units? Yes, generators at plant. All lift stations have generators. Service contract with generator service company; auto startup once a week.

Staffing: two certified operators, Matt Schommer and one other certified for NPDES. Another technician in training. Same staff for drinking water plant. Staff also work on property maintenance, plowing, elder requests.

Fees: user and usage fee for wastewater and water.

Unit: Interview/SSOs/CSOs	Contains CBI: No
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Observation #: DM1-OB-007	Date: 06/29/2022
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The Director provided responses to the questions below:

SSOs: Have there been any backups or overflows in the sanitary sewer collection system, including pump stations, manholes and piping over the last three years? No, except RV park incident in spring 2022. Heavy rainfall. RV company contractor adding services to primitive sites, and placed manhole cover on top of a wood pallet on top of manhole, allowing rainwater into the collection system. They were able to manage flow at the plant without issues. The overflow was reported to EPA pursuant to permit requirements. The overflow did not impact surface water.

CSOs: Is any portion of the Facility’s sewage collection system combined with the storm water collection system with designated outfalls? No.

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Unit: Interview/Pretreatment	Contains CBI: No
Observation #: DM1-OB-008	Date: 06/29/2022
<p>The Director provided responses to the following pretreatment questions:</p> <p>Any industrial connections? No.</p> <p>Commercial connections? Yes, casino and convenient store and gas station. No IUs.</p> <p>Casino: about 70% of flow. Casino has own big dipper (grease pit), to separate grease, remaining gets pumped to plant (Lift Station #1).</p> <p>Grease action plan in place. After casino lift station there are a few homes with E1 pumps. Two lift stations send flow to the plant. In general, the casino doesn't cause problems. Consistent flow through seasons.</p>	

Unit: Physical inspection of WWTF/Headworks	Contains CBI: No
Observation #: DM1-OB-009	Date: 06/29/2022
<p>We began the physical plant inspection at 12:40 pm on June 29, 2022. We were joined by Mike Termont (Indian Health Service). The Director led the physical inspection tour. I confirmed there were no CBI concerns regarding photographs or documentation.</p> <p>Headworks room: I observed the primary screw screen (see photo UPSC0001). The Director said the system is working well. I also observed the influent flow meter and parshall flume (see photo UPSC0002). The headworks also includes a backup bar screen used when the primary screw screen is under maintenance (see photo UPSC0003).</p> <p>Photo(s) UPSC0001.JPG; UPSC0002.JPG; UPSC0003.JPG</p>	

Unit: Physical inspection of WWTF/Aeration Tanks	Contains CBI: No
Observation #: DM1-OB-010	Date: 06/29/2022
<p>Aeration tanks. Receive flow from headworks. I observed the two covered extended aeration and equalization tanks. See view inside an aeration tank hatch in photo UPSC0004. The covered aeration tanks and equalization tanks are shown in photo UPSC0005.</p> <p>Photo(s) UPSC0004.JPG; UPSC0005.JPG;</p>	

Unit: Physical inspection of WWTF/Clarifiers	Contains CBI: No
Observation #: DM1-OB-011	Date: 06/29/2022
<p>Final clarifiers and effluent tank. I observed the two final clarifiers that receive partial flow from the aeration basins/EQ tanks. According to the Director, flow is distributed between the MBR and final clarifier. He provided a copy of the June 2022 WWTP log sheet (attached) showing effluent flow volumes from clarifiers and MBR. The clarifiers receive any flows the MBRs cannot handle. This situation can occur during drinking water tower backwash events, high flows, or significant casino events. The Director also explained that they are planning to install new pumps in the EQ basins to help regulate and provide consistent flows to the MBRs to reduce the need to use clarifiers. Effluent from clarifiers flows to the UV treatment system. See overview photo of covered clarifiers and effluent tank (photo UPSC0006).</p>	
Document(s)	
1. WWTP flow log_June 2022.pdf	
Photo(s) UPSC0006.JPG	

Unit: Physical inspection of WWTF/Final Outfall 001	Contains CBI: No
Observation #: DM1-OB-012	Date: 06/29/2022
<p>I observed final outfall 001 to the Minnesota River. The river level was too high to observe the outfall pipe and discharge characteristics (see photo UPSC0007).</p>	
Photo(s) UPSC0007.JPG	

Unit: Physical inspection of WWTF/Backup Generator	Contains CBI: No
Observation #: DM1-OB-013	Date: 06/29/2022
<p>I observed the Facility's backup generator (photo UPSC0008). The generator runs on propane.</p>	
Photo(s) UPSC0008.JPG	

Unit: Physical inspection of WWTF/SCADA System	Contains CBI: No
Observation #: DM1-OB-014	Date: 06/29/2022
<p>I observed the Facility SCADA system (photo UPSC0009).</p>	
Photo(s) UPSC0009.JPG	

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Unit: Physical inspection of WWTF/Influent/Effluent Auto Samplers Contains CBI: No	
Observation #: DM1-OB-015	Date: 06/29/2022
I observed the effluent (photo UPSC0010) and influent (UPSC0011) auto samplers. I noted that both auto samplers lacked thermometers to confirm samples are cooled and preserved as required by Permit Part II.3.C and 40 CFR Part 136. Mike Termont confirmed the influent auto sampler was configured for flow-based collection. The Director confirmed the effluent auto sampler was programmed to collect flow-based samples.	
Photo(s) UPSC0010.JPG; UPSC0011.JPG	

Unit: Physical inspection of WWTF/Membrane Bioreactor Contains CBI: No	
Observation #: DM1-OB-016	Date: 06/29/2022
I observed the Membrane Bioreactor (MBR) system (photo UPSC0012). The Director explained there are three filters in series on each side of the MBR. MBR cleaning solution tanks are shown in photo UPSC0015 (Azone - chlorine tank in foreground, citric tank in background).	
Treated flow from the MBR goes to the utility tank and then to the UV treatment system.	
Photo(s) UPSC0012.JPG; UPSC0015.JPG	

Unit: Physical inspection of WWTF/Ultraviolet (UV) Treatment System Contains CBI: No	
Observation #: DM1-OB-017	Date: 06/29/2022
I observed the UV treatment system, which consists of two parallel bulb banks (photo UPSC0013). The Director explained that they alternate bulb banks every year. Photo UPSC0014 shows the currently operational UV bank and the treated effluent.	
Photo(s) UPSC0013.JPG; UPSC0014.JPG	

Unit: Physical inspection of WWTF/Ferric Tank Contains CBI: No	
Observation #: DM1-OB-018	Date: 06/29/2022
The last stop in the physical Facility inspection was the ferric chloride tank (photo UPSC0016).	
Photo(s) UPSC0016.JPG	

SECTION III – RECORDS REVIEW

Record: Lab Bench Sheets	AOC: No
Ref #: DM1-RR-001	Reviewed By: Dean Maraldo
Reviewed Date: 06/29/2022	
I reviewed Wastewater Treatment Plant onsite monitoring logs for April -June 2022. No DO or pH effluent limit exceedances were identified and samples were collected pursuant to sampling requirements.	
Document(s)	
1. WWTP logs.pdf	

SECTION IV – SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

No sampling was conducted.

SECTION V - AREAS OF CONCERN

Areas of Concern may not be in sequential order.

The presentation of areas of concern does not constitute a formal compliance determination or violation.

Unit: Interview	Area: DMR Review
DM1-OB-001	
30 effluent limit exceedances were reported by the Facility from February 2018 to April 2022. TSS, Phosphorus, and CBOD ₅ violations may be due to a tear in MBR membrane. Assuming a tear, MBR filters scheduled for replacement this year.	Citations: Permit Part I.A.I (Final Effluent Limitations); Permit Part I.B.3 (Operation and Maintenance)

Unit: Interview	Area: Additional Monitoring
DM1-OB-003	
Additional Monitoring: lab reports show that the April 2019 monitoring event was actually conducted in May 2019, the July 2020 monitoring event was actually conducted in August 2021, and the October 2021 monitoring event was actually conducted in May 2022. Pursuant to the Permit, the Facility shall monitor the discharge from Outfall 001 for the constituents TKN, Nitrate plus Nitrite Nitrogen, Oil and Grease, TDS, and Ammonia (as N). Testing shall be conducted in January 2018, April 2019, July 2020 and October 2021, to represent seasonal changes.	Citations: Permit Part I.B.8 (Additional Monitoring)

Unit: Interview	Area: Self Monitoring
DM1-OB-005	
pH/DO field sample collection: data sheets do not include sample collection and analysis times for Ph and DO.	Citations: 40 CFR Part 136

Unit: Physical inspection ofWWTF	Area: Influent/Effluent Auto Samplers
DM1-OB-015	
Auto sampler preservation (cooling): I observed that both effluent and influent auto samplers lacked thermometers to confirm samples are cooled and preserved.	Citations: Permit Part II.3.C and 40 CFR Part 136.

SECTION VI – CLOSING CONFERENCE AND FOLLOW UP

Closing Conference

I held a closing conference with Facility personnel at 02:30 PM (CT) on 06/29/2022. During the closing conference, I discussed the observations and preliminary Areas of Concern identified during the inspection, and highlighted the concern regarding chronic permit effluent limit exceedances. Observations and preliminary Areas of Concern have not yet been evaluated for a formal compliance determination. Before concluding, I asked the Director if he had any questions. He did not.

Follow Up

Unit: Interview	Area: Other Non-DMR Reports
DM1-OB-002	
The Facility representatives were unable to confirm if the O&M Plan requirements under the Permit were met. According to the Permit Part I.B.3, the permittee shall implement an Operation & Maintenance Plan and Asset Management Plan, and submit an annual status report by January 31 of each year (Part I.B.3.b). The Director said he would discuss with the contract engineer and provide an update after the inspection.	

SECTION VII – LIST OF APPENDICES

1. Photo Log
2. Inspection Documents

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APPENDIX 1: PHOTOLOG

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Primary screw screen
UPSC0001.JPG
06/29/2022 12:42 PM (CT)
Dean Maraldo
Physical inspection of WWTF - Headworks
No CBI
No PII



Influent Parshall flume and flow meter
UPSC0002.JPG
06/29/2022 12:44 PM (CT)
Dean Maraldo
Physical inspection of WWTF - Headworks
No CBI
No PII



Backup bar screen
UPSC0003.JPG
06/29/2022 12:44 PM (CT)
Dean Maraldo
Physical inspection of WWTF - Headworks
No CBI
No PII



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View into aeration basin through hatch.
UPSC0004.JPG
06/29/2022 12:51 PM (CT)
Dean Maraldo
Physical inspection of WWTF/Aeration Tanks
No CBI
No PII



Covered aeration and equalization tanks.
UPSC0005.JPG
06/29/2022 12:52 PM (CT)
Dean Maraldo
Physical inspection of WWTF/Aeration Tanks
No CBI
No PII
Two covered equalization tanks are in background and two covered aeration tanks in foreground.



Final covered clarifiers (2) and effluent tank
UPSC0006.JPG
06/29/2022 1:04 PM (CT)
Dean Maraldo
Physical inspection of WWTF/Clarifiers
No CBI
No PII



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Final Outfall 001 to the Minnesota River
UPSC0007.JPG
06/29/2022 1:08 PM (CT)
Dean Maraldo
Physical inspection of WWTF/Final Outfall 001
No CBI
No PII
River level too high to observe actual outfall structure and discharge characteristics.



Facility backup generator
UPSC0008.JPG
06/29/2022 1:12PM (CT)
Dean Maraldo
Physical inspection of WWTF/Backup Generator
No CBI
No PII



SCADA system
UPSC0009.JPG
06/29/2022 1:13 PM (CT)
Dean Maraldo
Physical inspection of WWTF/SCADA System
No CBI
No PII
Image of SCADA control screen.



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Effluent Auto Sampler (Hach)
UPSC0010.JPG
06/29/2022 1:16 PM (CT)
Dean Maraldo
Physical inspection of WWTF/Influent/Effluent Auto Samplers
No CBI
No PII
Note lack of thermometer.



Influent Auto Sampler (Hach)
UPSC0011.JPG
06/29/2022 1:21 PM (CT)
Dean Maraldo
Physical inspection of WWTF/Influent/Effluent Auto Samplers
No CBI
No PII
Note lack of thermometer



MBR system
UPSC0012.JPG
06/29/2022 1:23 PM (CT)
Dean Maraldo
Physical inspection of WWTF/Membrane bioreactor
No CBI
No PII



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UV treatment system
UPSC0013.JPG
06/29/2022 1:25 PM (CT)
Dean Maraldo
Physical inspection of WWTF/Ultraviolet (UV) Treatment System
No CBI
No PII
Two UV bulb banks, alternated annually.



Effluent from currently operational UV treatment bank
UPSC0014.JPG
06/29/2022 1:26 PM (CT)
Dean Maraldo
Physical inspection of WWTF/Ultraviolet (UV) Treatment System
No CBI
No PII



MBR system cleaning solution tanks
UPSC0015.JPG
06/29/2022 1:28 PM (CT)
Dean Maraldo
Physical inspection of WWTF/Membrane bioreactor
No CBI
No PII
Azone -chlorine tank in foreground and Citric tank in background.



Ferric Chloride Tank
UPSC0016.JPG
06/29/2022 1:29 PM (CT)
Dean Maraldo
Physical inspection of WWTF/Ferric Tank
No CBI
No PII



APPENDIX 2: INSPECTION DOCUMENTS (attached below)

Document Type	Document Name	Contains CBI	Contains PII	Date Received
Violation History	Upper Sioux ELVs_20220627.pdf	No	No	NA – provided by EPA lead inspector
Lab Bench Sheets	WWTP logs.pdf	No	No	06/29/2022
Laboratory Analysis Reports	Additional Monitoring Lab Reports.pdf	No	No	06/29/2022
Flow Meter Logs	WWTP flow log_June2022.pdf	No	No	06/30/2022

Effluent Limit Exceedances Report
 MN0075001: UPPER SIOUX WWTF, GRANITE FALLS, MN 56241
 Monitoring Period Date Range: 07/01/2017 to 04/30/2022

Outfall 001 Exceedance Details

Monitoring Period Date	Parameter Description	Limit Type	DMR		Limit Value	Limit Value Qualifier	% Exceedance
			DMR Value	DMR Unit			
2/28/2018	BOD, carbonaceous, 05 day, 20 C	DAILY MX	34	mg/L	20	<=	70
3/31/2019	Solids, total suspended	DAILY MX	21	mg/L	20	<=	5
5/31/2019	BOD, carbonaceous, 05 day, 20 C	DAILY MX	23	mg/L	20	<=	15
3/31/2020	BOD, carbonaceous, 05 day, 20 C	DAILY MX	32	mg/L	20	<=	60
5/31/2020	Solids, total suspended	DAILY MX	42	mg/L	20	<=	110
5/31/2020	Solids, total suspended	30DA AVG	14.5	mg/L	10	<=	45
5/31/2020	Phosphorus, total (as P)	DAILY MX	0.225	kg/d	0.2	<=	13
5/31/2020	E. coli	DAILY MX	260	#/100mL	235	<=	11
6/30/2020	Solids, total suspended	DAILY MX	35	mg/L	20	<=	75
7/31/2020	Solids, total suspended	30DA AVG	10.71	mg/L	10	<=	7
7/31/2020	Solids, total suspended	DAILY MX	29	mg/L	20	<=	45
12/31/2020	BOD, carbonaceous, 05 day, 20 C	DAILY MX	21	mg/L	20	<=	5
1/31/2021	Solids, total suspended	DAILY MX	215	mg/L	20	<=	975
1/31/2021	Solids, total suspended	DAILY MX	32.53	kg/d	8.2	<=	297
1/31/2021	Solids, total suspended	30DA AVG	25.5	mg/L	10	<=	155
1/31/2021	Phosphorus, total (as P)	30DA AVG	1.19	mg/L	0.5	<=	138
1/31/2021	BOD, carbonaceous, 05 day, 20 C	DAILY MX	25	mg/L	20	<=	25
2/28/2021	Solids, total suspended	DAILY MX	21	mg/L	20	<=	5
4/30/2021	Oxygen, dissolved (DO)	MINIMUM	4.03	mg/L	7	>=	42
4/30/2021	Solids, total suspended	30DA AVG	20.41	mg/L	10	<=	104
4/30/2021	Solids, total suspended	DAILY MX	120	mg/L	20	<=	500
4/30/2021	Phosphorus, total (as P)	30DA AVG	0.57	mg/L	0.5	<=	14
5/31/2021	Solids, total suspended	DAILY MX	27	mg/L	20	<=	35
5/31/2021	Solids, total suspended	30DA AVG	10.92	mg/L	10	<=	9
5/31/2021	Phosphorus, total (as P)	DAILY MX	0.54	kg/d	0.2	<=	170
7/31/2021	Solids, total suspended	DAILY MX	30	mg/L	20	<=	50
1/31/2022	Solids, total suspended	DAILY MX	27	mg/L	20	<=	35
3/31/2022	Solids, total suspended	DAILY MX	38	mg/L	20	<=	90
3/31/2022	BOD, carbonaceous, 05 day, 20 C	DAILY MX	22	mg/L	20	<=	10
4/30/2022	Solids, total suspended	DAILY MX	35	mg/L	20	<=	75

2022	MLSS A/B TANK # 1	MLSS A/B TANK # 2	WAS PUMP 1	MLSS TANK # 1 MBR	MLSS TANK # 2 MBR	WAS PUMP 2	TEMP
2/24/22	15,000	14,000	8	15,000	18,000	8	48.6°
3/3/22	18,000	16,000	6	19,000	20,000	6	
3/4/22	15,000	15,000	6	17,000	18,000	6	50.2°
3/5/22	15,333	15,333	6	17,666	18,000	6	50.4°
3/9/22	14,000	15,000	6	17,000	17,666	6	49.5°
3/11/22	15,000	16,000	6	20,000	21,000	6	49.9°
3/12/22	15,000	16,000	6	20,000	20,000	6	
3/16/22	16,000	16,000	6	20,000	20,000	6	
3/18/22	15,333	16,000	6	19,333	19,000	6	50.3°
3/21/22	18,000	16,000	6	20,000	24,000	6	50.3°
3/24/22	18,333	16,000	6	20,000	24,000	6	51.4
3/26/22	19,000	17,000	6	20,333	24,000	6	51.0
3/28/22	17,000	18,000	6	21,000	23,666	6	50.6
3/30/22	18,000	18,000	6	22,000	24,000	6	49.7
4/2/22	18,000	16,000	6	20,000	16,000	6	49.6
4/7/22	15,000	17,000	6	22,000	17,000	6	49.7
4/8/22	14,666	17,000	6	22,000	19,333	6	49.7
4/10/22	14,000	16,000	6	17,000	18,000	6	
4/11/22	15,000	17,000	6	20,000	22,000	6	50.1°
4/13/22	16,000	18,000	6	20,000	21,000	6	50.4
4-14-22	15,000	16,000	6	19,000	19,000	6	49.6
4-19-22	16,000	16,000	4	19,666	20,000	4	49.7
4-21-22	16,666	16,000	4	20,000	20,000	4	50.2°
4-25-22	16,000	16,000	4	20,000	20,000	4	51.6
4-29-22	16,666	18,000	4			4	52.0°
4-30-22	16,000	18,000	4	20,000	18,000	4	51.9
5-13-22	16,000	14,000	4	19,000	15,000	4	54.6
5/15/22	16,000	15,000	4	19,000	16,666	4	55.7
5/18/22	16,000	15,000	4	16,000	18,000	4	
5/21/22	16,000	15,000	4	16,000	17,000	4	
5/22/22	16,000	15,000	4	16,000	17,000	4	
5/29/22	15,000	13,000	4	17,000	17,333	4	
5/31/22	16,000	15,000	4	16,000	19,333	4	
6/1/22	18,000	16,000	4	20,000	22,333	4	53.5
6/2/22	18,666	16,333	4	22,000	20,000	4	58.5
6/16/22	16,000	17,333	4	20,000	18,000	4	62.5°
2/19/22	15,000	13,000	8	15,000	20,000	8	
2/22/22	15,000	14,000	8	15,666	20,000	8	

7.97
7.58
7.39

USC WASTE WATER TREATMENT PLANT

Membrane Cleaning

Onsite Lab data

Date	Train #1 C12 Clean	Train #1 Citric Clean	Train #2 C12 Clean	Train #2 Citric Clean	MSSS Aeration tank	Ferric Tank level	Ferric Dosing level	Bioreactor DO	Membrane MSSS	Effluent DO	Influent pH	Effluent pH	Effluent Total P	Int.
Apr-22														
Fri 1		✓				4.1	3	9.03/8.97						CM
Sat 2					19,000/16,000	4.7	-	7.93/6.88	20,000/16,000	9.14	7.62	7.37		CM
Sun 3						4.4	3	5.91/1.24						DT
Mon 4						4.2	2	7.46/3.72		4.15	7.56	7.21		CM
Tue 5						4.0	2	4.13/7.12		9.26	7.41	7.06		CM
Wed 6						3.8	2	8.47/8.56	17,000/17,000	9.55	7.59	7.56		CM
Thu 7			✓		15,000/17,000	3.5	2	6.80/5.22	22,000/19,333	9.43	7.37	7.29		CM
Fri 8	Flush			✓	14,466/17,000	3.3	2	6.34/1.11						CM
Sat 9						3.0	3	5.11/1.10	17,000/18,000	7.38	7.82	2.15		A.U.
Sun 10	Flush				14,000/16,000	2.8	2	8.20/7.71	20,000/12,000	8.95	7.16	7.16		CM
Mon 11	✓				15,000/17,000	2.6	2	8.22/8.37		9.27	7.34	7.16		CM
Tue 12		✓				2.4	2	7.94/8.47	20,000/21,000	9.16	7.61	7.37		CM
Wed 13			✓		16,000/18,000	2.3	3	6.51/8.55						A.U.
Thu 14				✓		2.0	3							
Fri 15														
Sat 16					15,000/13,333	1.7	3	6.49/1.14	19,000/18,000	8.06	7.21	7.10		A.L.R.
Sun 17						1.5	2	7.15/1.04						A.U.
Mon 18			✓		15,000/16,000	1.3	2	7.68/6.58	19,000/19,000	9.27	7.60	7.06		D.F.
Tue 19				✓	16,000/16,000	1.1	2	8.20/6.43	19,000/20,000	9.97	7.58	7.39		CM
Wed 20				Flush		1.0	1	7.43/5.92		9.24	7.57	7.53		D.J.
Thu 21						3.9	Filled	8.70/9.63		9.59	7.75	7.33		
Fri 22		✓			16,000/16,000	4.7	-	7.83/8.64	20,000/20,000	9.37	7.64	7.77		on
Sat 23					16,000/16,000	4.1	3	6.30/7.11	20,000/16,000	9.19	7.43	7.11		on
Sun 24					16,000/16,000	4.3	1	5.43/2.61		9.34	7.79	7.06		CM
Mon 25			✓			4.1	2	0.84/3.60	20,000/20,000	9.16	7.32	7.11		CM
Tue 26				✓	16,000/16,000	3.9	2	1.96/1.84		9.31	7.65	7.33		CM
Wed 27	✓				16,000/16,000	3.7	2	5.38/5.55						CM
Thu 28		✓				3.5	2	7.41/7.02						CM
Fri 29		✓			16,000/16,000	3.4	1	6.64/4.78	20,000/15,000					CM
Sat 30				✓	16,000/16,000	3.2	2	6.77/5.62	20,000/16,000	9.42	7.62	7.24		CM
Sun 31						3.2	2							DT

USC WASTE WATER TREATMENT PLANT

W

Membrane Cleaning										Onsite lab data				
May-22	Train #1 Cl2 Clean	Train #1 Citric Clean	Train #2 Cl2 Clean	Train #2 Citric Clean	MLSS Aeration tank	Ferric Tank Level	Ferric Dosing level	Bioreactor DO	Membrane MLSS	Effluent DO	Influent pH	Effluent pH	Effluent Total P	Int.
1						2.9	.3	3.64/0.65		4.20	7.94	7.11		DD
2						2.8	.1	5.76/2.01						CM
3	✓					2.7	.1	7.80/7.52						CM
4		✓				2.5	.2	0.02/0.01		9.12	7.00	7.26		CM
5			✓			2.3	.2	10.11/7.22		9.21	7.54	7.22		CM
6				✓	15000/10000	2.1	.2	2.37/4.44	17000/20000					AirL
7	Flush				16000/15000	4.16	Filled	4.35/2.84	18000/19000					
8					17000/15353	4.2	.4	.62/0.56	20000/22000					
9						4.9	-	3.38/1.95		8.97	7.60	7.25		CM
10						4.6	4.6	3.7/5/6.78		5.09	7.19	7.43		DD
11	Cl2				16000/14000	3.7	.9	8.66/8.07	19000/18000	8.96	7.50	7.10		
12														
13				✓										
14														
15														
16					11000/15000	3.2	.5	0.30/4.62	19000/10000	9.10	7.42	7.22		CM
17						2.7	.2	8.47/7.58		8.78	7.65	7.67		CM
18					10000/15000	2.9	.3	8.67/7.68	10000/18000	8.74	7.31	7.07		CM
19			✓			2.5	.2	7.81/6.37		8.46	7.57	6.90		CM
20														
21				✓	16000/18000	2.1	.4	5.77/5.01	16000/17000	6.53	7.44	7.13		DD
22						1.9	.2	8.9/4.80		8.62	7.54	7.24		DD
23						1.7	.2	7.72/5.84		8.71	7.41	7.37		CM
24														
25	✓					4.6	find	9.80/6.94		9.11	7.34	7.12		CM
26					14000/15000	4.0	.6	8.83/7.22	16000/17000	7.37	7.60	7.22		CM
27			✓			4.7	.2	0.96/7.70						CM
28						4.5	.2	7.45/1.23						AirL
29					15000/13000	4.3	.2	6.54/1.62	17000/17333					AirL
30						2.9	.2							
31	✓				16000/15000	5.9	.4	7.82/3.25/7.00	19333	8.20	7.71	7.36		DD

USC WASTE WATER TREATMENT PLANT

Membrane Cleaning										Onsite lab data				
Date	Train #1 Cl2 Clean	Train #1 Citric Clean	Train #2 Cl2 Clean	Train #2 Citric Clean	MLSS Aeration tank	Ferric Tank level	Ferric Dosing level	Bioreactor DO	Membrane MLSS	Effluent DO	Influent pH	Effluent pH	Effluent Total P	Int.
Jun-22														
Wed 1														
Thu 2		Flush			18000/16000	3.7	.2	7.49/3.05	20000/18333	8.36	7.68	7.43		CM
Fri 3					18000/16333	3.5	.2	4.36/1.19	22000/20000	8.47	7.59	7.26		CM
Sat 4					18000/18000	3.3	.2	4.84/1.38	26000/20332	8.59	7.46	7.31		CM
Sun 5					18000/17000	3.1	.2	4.91/1.11						CM
Mon 6					18000/17000	2.9	.2	5.82/0.66	22333/21000					CM
Tue 7					18000/18000	2.7	.2	7.63/1.06		8.75	7.31	7.00		CM
Wed 8					18000/18000	2.5	.2	7.05/1.60	2000/20000	8.59	7.68	7.20		CM
Thu 9					18000/18000	4.4	Filled	7.06/0.62						CM
Fri 10					18000/18000	4.4		6.96/1.10	2000/21000	8.61	7.53	7.11		CM
Sat 11					18000/18000	4.0	.4	6.62/0.60	2000/21000					CM
Sun 12					16000/18000	4.7	.8	7.86/0.77	21000/21000	8.72	7.61	7.13		CM
Mon 13					16000/18000	4.3	.2	7.08/1.18	21000/21000	8.67	7.52	7.10		CM
Tue 14						4.3	.2	5.65/0.54		8.24	7.59	7.11		CM
Wed 15						4.1	.2	5.34/1.13						CM
Thu 16														CM
Fri 17					16000/17333	3.7	.4	4.24/0.51	2000/18000	8.03	7.77	7.62		CM
Sat 18					16000/18000	3.5	.2	5.66/0.54	21000/17000	8.00	7.69	7.12		CM
Sun 19	Flush				18,000/16,333	3.3	.2	7.33/0.97						CM
Mon 20						3.1	.2	7.34/0.77	20,000/23,000	7.75	8.18	6.84		CM
Tue 21						2.9	.2	5.10/0.60		7.45	7.65	7.07		CM
Wed 22						2.7	.2	5.18/1.90	25,000/21,000	7.96	7.86	7.50		CM
Thu 23						2.6	.1	9.40/2.87		8.34	7.78	7.57		CM
Fri 24						2.3	.3	7.02/0.23		7.80	7.67	7.41		CM
Sat 25						2.1	.2	8.66/0.74		7.81	7.44	7.21		CM
Sun 26					17333/21000	2.1	.2	7.75/1.72	25000/20000	7.84	7.14	7.20		CM
Mon 27					18000/19000	1.9	.2	7.62/0.78						CM
Tue 28					18000/19000	1.5	.4	9.14/1.63	25000/18000	8.45	7.17	7.16		CM
Wed 29					18000/19000	1.2	.3	8.43/6.45	28000/18000	8.27	7.93	7.27		CM
Thu 30					16000/19000	1.6	.4	7.83/5.81	30000/20000	8.22	7.96	7.29		CM
Fri 31														CM

MINNESOTA VALLEY TESTING LABORATORIES, INC.

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PRELIMINARY REPORT

MATT SCHOMMER
UPPER SIOUX COMMUNITY/PUBLIC WORKS
PO BOX 147
GRANITE FALLS MN 56241-0147

Report Date:
Lab Number: 18-A2371
Work Order #: 12-3563
Account #: 007111
Sample Matrix: WASTEWATER
Date Sampled: 17 Jan 2018 8:00
Date Received: 17 Jan 2018 14:20
PO #: 1/17/18

Project Name: USC WWTP

Sample Description: EFFLUENT

Temp at Receipt: 2.5C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Nitrate+Nitrite	Not Entered	mg/L as N	0.05	353.2		
Nitrogen, Ammonia	< 0.16	mg/L	0.16	SM 4500 NH3 C-97	22 Jan 18	9:30 RB
Nitrogen, Total Kjeldahl	1.7	mg/L	0.2	SM 4500 NH3 C-97	22 Jan 18	8:30 RB
Solids, Total Dissolved	834	mg/L	10	SM 2540 C-97	19 Jan 18	7:20 RC

RL = Reporting Limit

Analyses performed under our Minnesota Department of Health Accreditation conform to the current TNI standards. The reporting limit was elevated for any analyte requiring a dilution as coded below:

* = Due to sample matrix

= Due to concentration of other analytes

! = Due to sample quantity

+ = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125

WI LAB # 999447680

ND MICRO # 1013 M

ND WW/DW # R-040

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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PRELIMINARY REPORT

MATT SCHOMMER
UPPER SIOUX COMMUNITY/PUBLIC WORKS
PO BOX 147
GRANITE FALLS MN 56241-0147

Report Date:
Lab Number: 18-A2370
Work Order #: 12-3563
Account #: 007111
Sample Matrix: WASTEWATER
Date Sampled: 16 Jan 2018 11:15
Date Received: 17 Jan 2018 14:20
PO #: 1/17/18

Project Name: USC WWTP

Sample Description: EFFLUENT

Temp at Receipt: 2.5C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Oil and Grease	5.19	mg/L	5.00	EPA 1664B	26 Jan 18 12:30	MDK

PRELIMINARY REPORT: RESULTS ARE SUBJECT TO CHANGE PENDING FINAL APPROVAL OF DATA.

RL = Reporting Limit

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The reporting limit was elevated for any analyte requiring a dilution as coded below:

⊙ = Due to sample matrix

= Due to concentration of other analytes

! = Due to sample quantity

+ = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040

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MATT SCHOMMER
 UPPER SIOUX COMMUNITY/PUBLIC WORKS
 PO BOX 147
 GRANITE FALLS MN 56241-0147

Report Date: 21 May 2019
 Lab Number: 19-A21035
 Work Order #: 12-8417
 Account #: 007111
 Sample Matrix: WASTEWATER
 Date Sampled: 8 May 2019 8:15
 Date Received: 8 May 2019 14:30
 PO #: 5/8/19

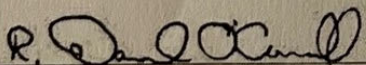
Project Name: MONITORING 2019

Sample Description: DISCHARGE

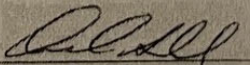
Temp at Receipt: 5.3C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Nitrate+Nitrite	5.39	mg/L as N	0.05	353.2	10 May 19 14:43	SS
Nitrogen, Ammonia	< 0.16	mg/L	0.16	SM 4500 NH3 C-97	20 May 19 7:41	TAM
Nitrogen, Total Kjeldahl	1.8	mg/L	0.2	SM 4500 NH3 C-97	17 May 19 9:50	TAM
Oil and Grease	< 5	mg/L	5	EPA 1664B	20 May 19 12:15	MDK
Solids, Total Dissolved	1040	mg/L	10	SM 2540 C-97	9 May 19 16:31	AL

Approved by:



Dan O'Connell



David Smahel

Chemistry Laboratory Managers New Ulm, MN

RL = Reporting Limit.

Analyses performed under our Minnesota Department of Health Accreditation conform to the current TNI standards.
 The reporting limit was elevated for any analyte requiring a dilution as coded below:

@ = Due to sample matrix # = Due to concentration of other analytes
 ! = Due to sample quantity + = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125 ND WW/DW # R-040

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Appendix 2, page 8



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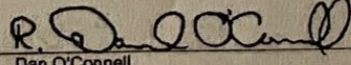
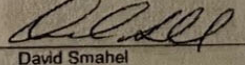
MATT SCHOMMER
 UPPER SIOUX COMMUNITY/PUBLIC WORKS
 PO BOX 147
 GRANITE FALLS MN 56241-0147

Report Date: 8 Sep 2020
 Lab Number: 20-A41408
 Work Order #: 12-13077
 Account #: 007111
 Sample Matrix: WASTEWATER
 Date Sampled: 27 Aug 2020 10:30
 Date Received: 27 Aug 2020 12:25

Sample Description: EFFLUENT MONITORING 2020

Temp at Receipt: 3.2C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Nitrate+Nitrite	16.0	mg/L as N	0.05	353.2	3 Sep 20 12:39	SS
Nitrogen, Ammonia	< 0.16	mg/L	0.16	SM 4500 NH3 C-97	1 Sep 20 8:25	EW
Nitrogen, Total Kjeldahl	1.8	mg/L	0.2	SM 4500 NH3 C-97	31 Aug 20 8:17	EW
Oil and Grease	< 5	mg/L	5	EPA 1664B	4 Sep 20 17:30	MDK
Solids, Total Dissolved	1150	mg/L	10	SM 2540 C-97	2 Sep 20 12:54	RLY

Approved by:  
 Dan O'Connell David Smahel
 Chemistry Laboratory Managers New Ulm, MN

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 The reporting limit was elevated for any analyte requiring a dilution as coded below:
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 ! = Due to sample quantity + = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125 ND WQ/DW # R-040

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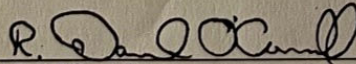
Report Date: 24 May 2022
Lab Number: 22-A23301
Work Order #: 12-9510
Account #: 007111
Sample Matrix: WASTEWATER
Date Sampled: 16 May 2022 8:15
Date Received: 16 May 2022 10:29
PO #: 5/16/22

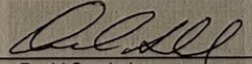
Temp at Receipt: ROI 7.4C

Sample Description: EFFLUENT MONITORING

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Nitrate+Nitrite	4.61	mg/L as N	0.05	353.2	19 May 22 14:41	KRM
Nitrogen, Ammonia	< 0.16	mg/L	0.16	SM 4500 NH3 C-97	19 May 22 11:30	GG
Nitrogen, Total Kjeldahl	1.9	mg/L	0.2	SM 4500 NH3 C-97	19 May 22 8:45	GG
Oil and Grease	5.13	mg/L	5.00	EPA 1664B	23 May 22 12:30	MDK
Solids, Total Dissolved	632	mg/L	10	SM 2540 C-97	19 May 22 10:46	PJH

Approved by:


Dan O'Connell


David Smahel

Chemistry Laboratory Managers New Ulm, MN

RL = Reporting Limit

Analyses performed under our Minnesota Department of Health Accreditation conform to the current TNI standards.

The reporting limit was elevated for any analyte requiring a dilution as coded below:

@ = Due to sample matrix

= Due to concentration of other analytes

! = Due to sample quantity

+ = Due to internal standard response

CERTIFICATION: MN LAB # 027-015-125 ND WW/DW # R-040

USC WWTP LOG 2022

Jun-22	Int.	Time	Influent Totalizer	Influent Daily Total	Effluent Totalizer	Effluent Daily Total	Train turbidity	Train Temp.	Outside Temp.
Wed 1	CM	0825	163,363	44	111,950	18+15=33	6.24	64.4	60°
Thu 2	CM	0843	163,417	51	111,971	18+20=38	5.28	63.7	59°
Fri 3	CM	0828	163,463	51	111,993	22+16=38	5.15	65.5	57°
Sat 4	CM	0733	163,129	60	112,020	37+6=43	5.22	65.6	56°
Sun 5	CM	0845	163,576	57	112,058	35+9=44	5.61	66.0	59°
Mon 6	CM	0841	163,637	61	112,090	32+15=47	5.58	65.8	65°
Tue 7	CM	0855	163,688	50	112,113	24+13=37	5.65	65.5	67°
Wed 8	CM	226	163,710	47	112,147	30+4=36	5.42	65.7	64
Thu 9	CM	0942	163,779	41	112,186	39+0=39	5.31	66.1	70°
Fri 10	CM	0842	163,826	48	112,209	26+7=33	5.16	65.9	69°
Sat 11	DJ	0846	163,883	52	112,243	26+8=34	5.20	66.2	65°
Sun 12	DJ	0815	163,936	57	112,278	37+8=45	5.17	66.9	65°
Mon 13	CM	0900	163,993	56	112,312	33+11=44	5.58	67.5	79°
Tue 14	CM	0841	164,042	51	112,336	27+12=39	5.44	68.9	84°
15							4.48	6	
Thu 16	CM	1055	164,142	43	112,400	34+2=36	4.48	68.9	
Fri 17	CM	0858	164,180	46	112,407	15+16=31	4.06	69.1	67°
Sat 18	A.M.	1157	164,240	46	112,443	21+19=40	3.92	69.6	86°
Sun 19	A.M.	1101	164,290	52	112,477	37+2=39	3.93	70.5	
Mon 20	DJ	0810	164,333	57	112,507	34+ 11	3.74	71.8	84°
Tue 21	CM	0806	164,387	51	112,540	31+ 11	4.22	71.7	76°
Wed 22	CM	0821	164,430	42	112,569	30+ 11	3.99	71.8	69°
Thu 23	CM	0741	164,481	47	112,603	30	3.69	71.7	69°
Fri 24	CM	1006	164,541	46	112,651	42-	3.52	71.6	75°
Sat 25	CM	0904	164,594	57	112,687	38	3.65	71.7	70°
Sun 26	CM	0946	164,666	66	112,722	35	3.78	71.5	71°
Mon 27	CM	0802	164,719	64	112,753	36+24=56	5.33	69.3	68°
Tue 28	DJ	0820	164,777	52	112,773	23+3=26	5.12	70.5	74°
Wed 29	DJ	0800	164,828	55	112,806	29+0=29	5.17	70.1	68°
30									
31									

Clarifier Eff. Rec. 10