



NPDES Compliance Inspection Report

City of Toppenish WWTP Toppenish, Washington

Permit #: WA0026123

Inspection Date: August 24, 2022

Prepared by:

Raymond Andrews
U.S. Environmental Protection Agency, Region 10
Enforcement & Compliance Assurance Division
Water Enforcement & Field Branch
Field, Data & Drinking Water Enforcement Section

Signature/Date:

Supervisor Signature/Date:

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(All details in this report were obtained through conversations with Mr. Shaun Burgess, Public Works Supervisor, Mr. Dan Musgrave, Lead Wastewater Operator, and Mr. Mike Deschong, Wastewater Operator, or from observations made during the inspection.)

I. Facility Information

Facility Name: Toppenish Wastewater Treatment Plant

Facility Owner/Operator: City of Toppenish, Washington

Physical Address: 501 Annahat Road
Toppenish, WA 98948
Yakima County

Lat/Long: 46.36078, -120.284328

Mailing Address: 21 West 1st Avenue
Toppenish, WA 98948

NAICS Code: 221320 (Sewage Treatment Facilities)
SIC Code: 4952 (Sewerage Systems)

Facility Contacts: Shaun Burgess
Public Works Supervisor
Office Phone: 509-865-4500
Email: shaun.burgess@cityoftoppenish.us

Dan Musgrave
Lead Wastewater Treatment Operator
509-865-1631
Email: daniel.musgrave@cityoftoppenish.us

Permit Number: WA0026123

Receiving Water: Toppenish Drain → Yakima River

II. Inspection Information

Inspection Date: August 24, 2022

Inspectors: Raymond Andrews, Inspector
EPA Region 10, ECAD /FDDWES
Phone: 206-553-4252

Arrival Time: 9:30 AM

Departure Time: 2:00 PM

Weather: Overcast, 85°F

Purpose: To determine facility compliance with the National Pollutant Discharge Elimination System (NPDES) permit and the Clean Water Act.

III. Permit Information

The Toppenish Wastewater Treatment Plant (“Facility”) is permitted under the National Pollutant Discharge Elimination System (NPDES) permit (“Permit”) for wastewater treatment facilities. The Facility’s permit, NPDES Permit # WA0026123, became effective on July 1, 2013, and expired on June 30, 2018. The permit was administratively continued.

IV. Background

The City of Toppenish owns and operates the Wastewater Treatment Plant located at 501 Annahat Road in Toppenish, Washington.

EPA last inspected the facility on September 24, 2015. As a result of the inspection, the facility received a Notice of Violation (NOV) for flow meters not being calibrated, lack of adequate sampling documentation, and a Quality Assurance (QA) Plan that did not meet the requirements outlined in EPA guidance documents.

On March 22, 2011, EPA issued a formal action against the facility for 1,806 effluent exceedance violations during the period from June 2008 through May 2010. The effluent exceedance violations included copper, ammonia, and zinc. The compliance agreement required the city to meet the permit’s effluent limits and pay an administrative penalty of \$134,500.

V. Inspection Chronology

This was an announced inspection. On August 18, 2022, I called the City of Toppenish and spoke with Mr. Shaun Burgess, the Interim Public Works Superintendent, and told him I would be arriving on August 24th, to conduct an inspection of the City of Toppenish wastewater treatment facility (“Facility”).

I arrived at the facility at 9:30am, and was greeted by, and presented my inspector credentials to, Mr. Dan Musgrave, Lead Wastewater Treatment Operator.

I conducted an Opening Conference with Mr. Musgrave. I informed him the purpose of the inspection was to ensure the facility was operating in accordance with its NPDES permit and the Clean Water Act (CWA).

Following the Opening Conference, I inspected the facility’s on-site laboratory. I then conducted a site inspection. Mr. Musgrave accompanied me throughout the inspection. I was not denied access to any part of the facility. Upon completion of the site inspection, I conducted a Closing Conference with Mr. Musgrave.

VI. Opening Conference

The facility has been in operation at its current location since 1972. Mr. Musgrave holds a Level II Wastewater Treatment Operator certification. The facility also has a Level I Wastewater Treatment Operator, Mr. Mike Deschong.

During the Opening Conference, Mr. Musgrave provided information about the facility's operations and answered all my questions.

The facility serves a population of approximately 9,000, and is on land of the Confederated Tribes and Bands of the Yakama Nation but is not owned or operated by the Tribe. The facility is staffed from 7:00am through 3:30pm, Monday through Friday. System readings are checked every day.

The facility has a design flow of 1.67 Million Gallons Per Day (MGD), and has an average flow of 0.69 MGD. The facility has a continuous discharge through a single outfall into the Toppenish Drain, which is a tributary of the Yakima River.

The facility does not accept any waste from industrial users. The collection system has no combined sewers. The effluent is treated with activated sludge and ultraviolet (UV) disinfection.

At the time of inspection, two components of the facility were inoperable. The influent screen was not in operation due to a broken chain. The facility is using a manual bar screen until the mechanical screen's chain can be repaired. The collected solids are disposed of in the City's Landfill. The heat exchanger was also not operational and needed to be replaced. With the heat exchanger out of order, the facility was unable to maintain an adequate temperature during the winter to keep the bacteria in the activated sludge alive, which threw the system out of balance. The facility was unable to dewater the sludge because the effluent produced would exceed parameter limits. The facility is using geotubes, i.e., biobags, to contain the sludge while the facility investigates having the sludge disposed of off-site.

The facility is required to conduct Surface Water Monitoring. The surface water's flow is monitored monthly. Phosphorus, nitrogen, hardness, alkalinity, and pH are monitored monthly. Surface water is monitored 20-yards upstream and 20-yards downstream from the outfall in the Toppenish drain.

The facility maintains all records and data recordings for five years, as required.

VII. Site Inspection

Attachment A contains an aerial image of the site provided by Google, and a site diagram provided by the facility.

Attachment B contains photos used in the inspection report and a complete photograph log.

Mr. Musgrave started the tour of the facility at the headworks. He pointed out the inoperable influent screen (**Photo 1**) and explained the facility is currently using a manual bar screen until the influent screen's chain can be repaired. From the influent screen, we walked the path the wastewater took through treatment. We went to the grit chamber, then the flow through secondary bar screen which was open and not screening at the time of the inspection (**Photo 2**). We went to the influent well, the primary clarifier, the aeration basins, and the secondary clarifiers. The facility

uses a series of three UV stations for disinfection (**Photo 3**). The bulbs are housed in aluminum protectors and covered with a grate (**Photo 4**). The UV system is serviced annually. The facility uses an auto-sampler to collect its effluent samples (**Photos 5 – 7**). When it is time to sample, the facility places a collection bottle in the system and inserts the hose into it. The auto-sampler is refrigerated and, as can be seen in **Photo 7**, has a mercury thermometer for temperature verification. The facility collects effluent grab samples in the Parshall Flume (**Photo 8**). The Parshall Flume also has an ultrasonic effluent flow meter suspended above the wastewater flow path (**Photo 9**). From the Parshall Flume, we went to the anaerobic digesters which sends sludge to the screw press. The screw press was not in operation at the time of the inspection and sludge was being stored in bags while the facility researches options for off-site disposal. For the digesters, we walked to the facility's only outfall (**Photo 10**). The outfall was under a platform which I stood on to take the picture. There was a large area of a foamy substance that appeared to be coming from the outfall.

VIII. Laboratory Inspection

The facility conducts monitoring in-house for pH, dissolved oxygen (DO), and temperature. The facility contracts a private laboratory to conduct wastewater analysis for the following parameters; total Phosphorus (P), total Copper (Cu), total Lead (Pb), Selenium (Se), Zinc (Zn), total Arsenic (As), total Silver (Ag), hardness, total dissolved solids, total dissolved solids, and total Kjeldahl Nitrogen (N).

The contract lab used by the facility is: Cascade Analytical
3019 G.S. Center Road
Wenatchee, WA 98801
(509) 662-1888

The lab uses standard quality control procedures. All calibration reagents and blanks are current. The pH and DO meters are calibrated prior to each use per the Operator's Manual.

Mr. Musgrave performs, and records, daily temperature checks on the refrigerator, incubator, and oven. The lab uses a mercury thermometer for each device to verify the unit's temperature. The daily checks are conducted Monday through Friday except for holidays.

IX. File Review

I reviewed the following records and documents:

- Integrated Compliance Information System (ICIS) Data, October 2017 through September 2022
- NPDES Renewal Application, December 2017
- NPDES Permit Application Renewal Letter, January 2018
- Quality Assurance (QA) Plan, dated December 2016
- Operation and Maintenance (O&M) Plan, updated June 2011
- Emergency Response & Notification Plan, August 2022
- Discharge Monitoring Reports, August 2019 – July 2022
- Surface Water Monitoring Reports, August 2019 – July 2022
- Laboratory Chain of Custody Documents, January 2020 – July 2022
- Calibration & Maintenance, August 2019 – July 2022
- 5-Day Zinc Exceedance Notification, March 2021 – August 2022

X. Areas of Concern

I noted the following areas of concern:

A. Effluent Exceedances

Part I.B.1, Table 1 of the permit lists the permit limits that must not be exceeded for all monitored parameters. Table 1 shows the following for the zinc, total recoverable parameter:

Zinc, Total Recoverable (October – April)	µg/L	50.49	—	106	Effluent	1/month	Composite
	lb/day	0.803	—	1.48			Calculation
Zinc, Total Recoverable (May – September)	µg/L	57.4	—	112	Effluent	1/month	24-Hour Composite
	lb/day	0.803	—	1.56			Calculation

As part of the inspection, I reviewed data in EPA’s I CIS from August 2017 through July 2022. I found the facility exceeded the effluent limits for zinc 580 times from February 2021 through August 2022. The list of exceedances is included in **Attachment C**.

B. Unauthorized Discharge

Part I.B.3 of the permit states, “The permittee must not discharge any floating solids, visible foam in other than trace amounts, or oily wastes that produce a sheen on the surface of the receiving water.”

During the site tour, I observed a heavy, foamy substance at the point of discharge from the sole outfall. The foamy substance can be observed in **Photo 10**, as stated above.

C. Quality Assurance (QA) Plan

1. Part II.B.2 of the permit states, in part, “Throughout all sample collection and analysis activities, the permittee must use the EPA-approved QA/QC and chain-of-custody procedures described in the most recent version of Requirements for Quality Assurance Project Plans (EPA/QA/R-5) and Guidance for Quality Assurance Project Plans (EPA/QA/G-5). The QAP must be prepared in the format which is specified in these documents.”

At the time of inspection, I reviewed the Facility’s QA plan. I found the plan was not prepared in the format of the references named above. A cursory review of the QA plan provides the following examples. The QA plan:

- Did not use the correct section titles;
- Did not have current contract laboratory contact information;
- Did not list qualifications and training of employees; and

- Did not have a Distribution List.
2. Part II.B.3.d of the permit states, the QA plan must include the “Name(s), address(es) and telephone number(s) of the laboratories used by or proposed to be used by the permittee.” The permittee must amend the QAP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAP.

At the time of inspection, I reviewed the facility’s QA plan and found it needed to be updated because it had contact information for the previously used contract laboratory but did not have any information on its current contract laboratory.

D. Preservation Temperature

Part III.C of the permit states, in part, “Monitoring must be conducted according to test procedures approved under 40 CFR 136...”

40 CFR Part 136, Table II, shows the preservation temperature for most water sample parameters is $\leq 6^{\circ}\text{C}$.

During the inspection, I reviewed chain of custody (COC) documents from January 2020 through July 2022. Approximately 99% of the COC documents reviewed were either missing the temperature upon receipt by the lab, or the temperature was more than 6°C . The excessive temperatures ranged from 8°C to 21°C .

E. Operation and Maintenance (O&M) Plan

Part IV.E of the permit states, in part, “The permittee must 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.

At the time of the inspection, the facility’s influent screen and heat exchanger were inoperable. The facility was using alternate means to ensure pollutants in excess of its limits were not discharged.

XI. Closing Conference

On August 24, 2022, I held a closing conference with Mr. Musgrave. We discussed my observations and I gave a brief overview of the post-inspection process. I thanked him for his time and assistance and departed.

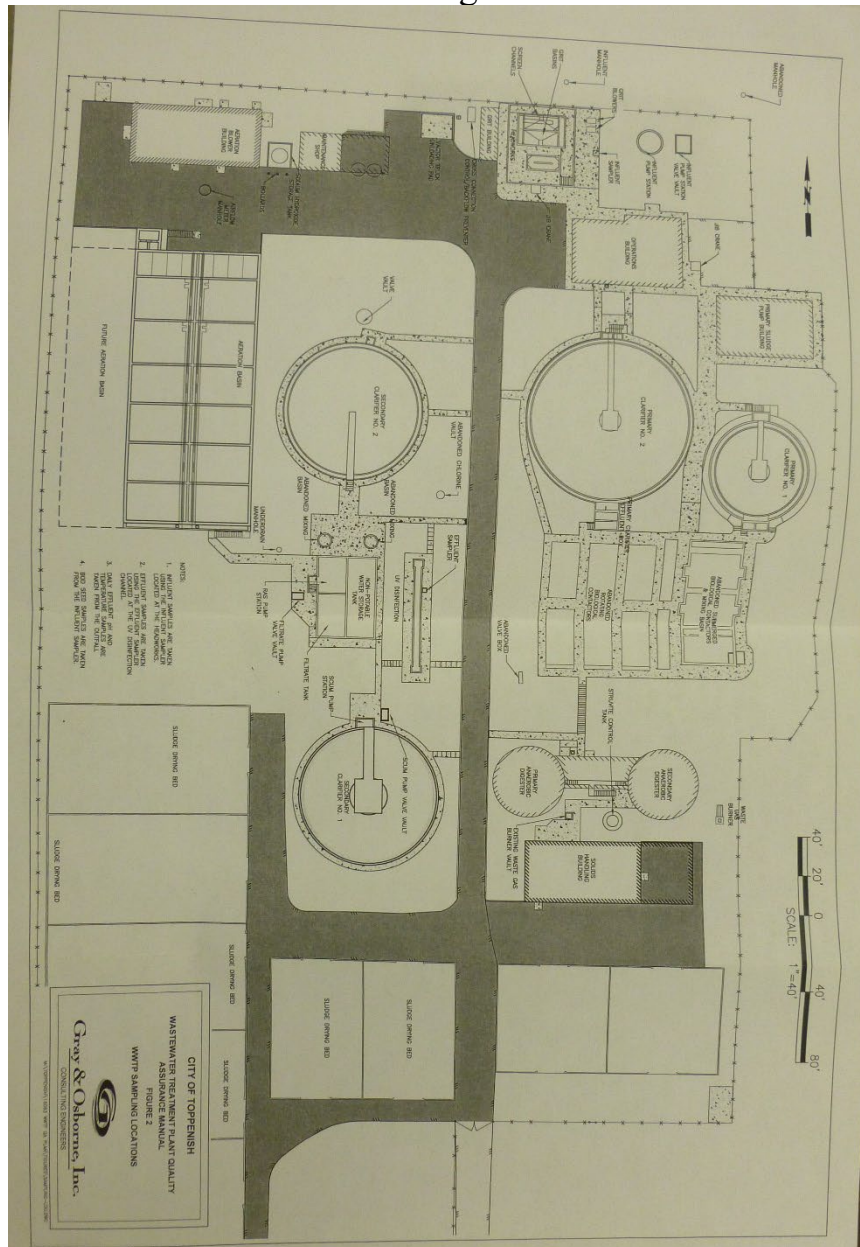
ATTACHMENT A

Aerial Site Image and Site Diagram

Aerial Site Image



Site Diagram



ATTACHMENT B
Inspection Photographs and Photograph Log
(Photographs taken by Ray Andrews on August 24, 2022, with a Panasonic DMC-FH25 camera)



Photo 1 / P1010448 – Influent Screen, inoperable



Photo 2 / P1010451 – Secondary Bar Screen



Photo 3 / P1010462 – UV Bank, exterior



Photo 4 / P1010461 – UV Bank, interior



Photo 5 / P1010463 – Auto-Sampler, control panel



Photo 6 / P1010464 – Auto-Sampler, exterior



Photo 7 / P1010465 – Auto-Sampler, interior



Photo 8 / P1010466 – Parshall Flume, grab sample location

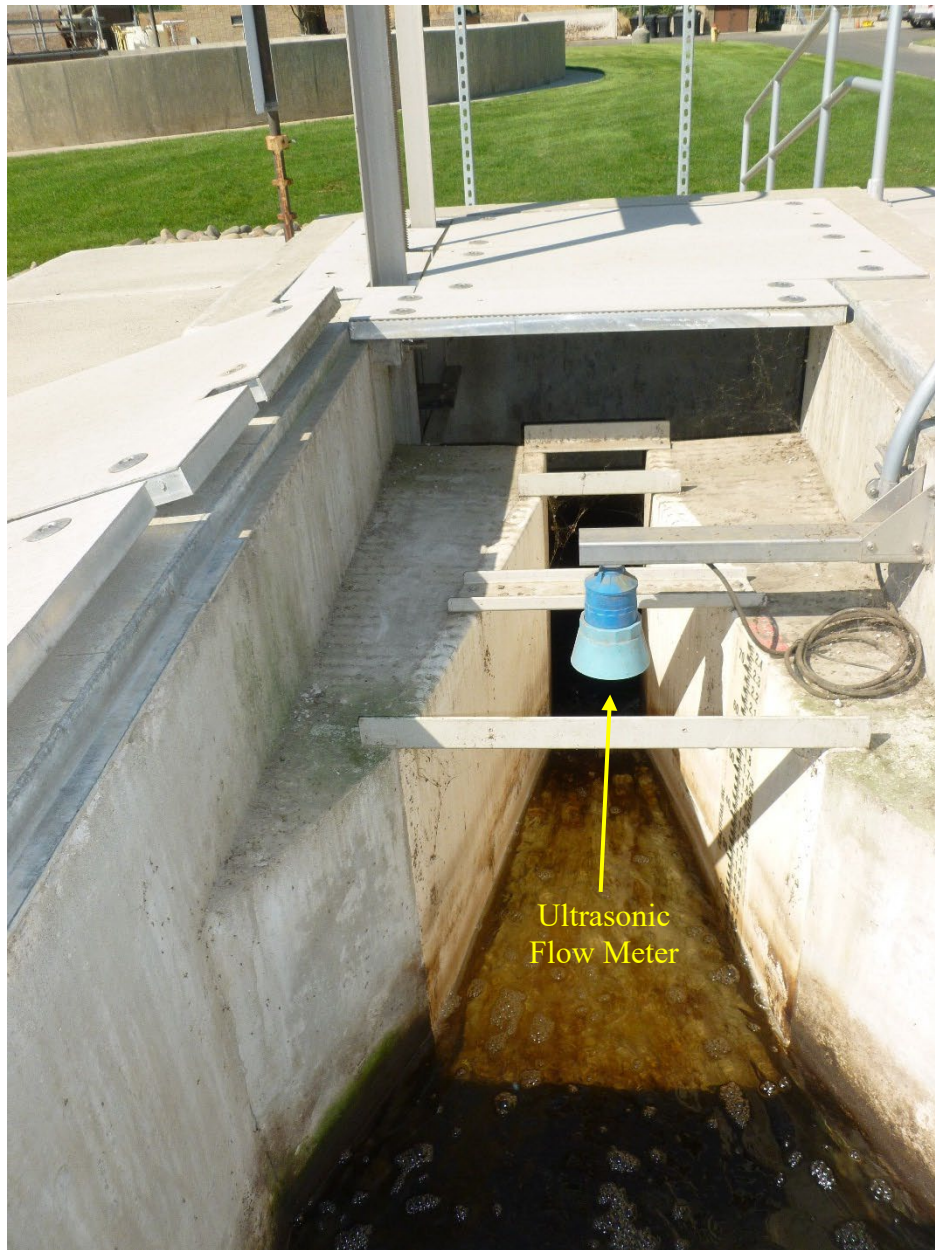


Photo 9 / P1010467 – Parshall Flume, flow meter location



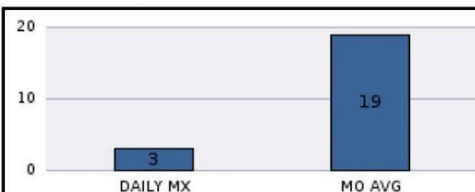
Photo 10 / P1010469 – Outfall

Complete list of photographs taken during the inspection:

- P1010442 – Site Diagram, photo 1
- P1010443 – Site Diagram, photo 2
- P1010444 – Surface Water Sampling Location Map, photo 1
- P1010445 – Surface Water Sampling Location Map, photo 2
- P1010446 – EPA Permit Application Renewal Letter, page 1
- P1010447 – EPA Permit Application Renewal Letter, page 2
- P1010448 – Influent Screen, inoperable
- P1010449 – Grit Chamber
- P1010450 – Secondary Bar Screen, photo 1
- P1010451 – Secondary Bar Screen, photo 2
- P1010452 – Influent Well, interior
- P1010453 – Influent Well, exterior
- P1010454 – Primary Clarifier, photo 1
- P1010455 – Primary Clarifier, photo 2
- P1010456 – Aeration Basin, right side
- P1010457 – Aeration Basin, left side
- P1010458 – Secondary Clarifier, photo 1
- P1010459 – Secondary Clarifier, photo 2
- P1010460 – UV Bank, interior, photo 1
- P1010461 – UV Bank, interior, photo 2
- P1010462 – UV Bank, exterior
- P1010463 – Auto-Sampler, control panel
- P1010464 – Auto-Sampler, exterior
- P1010465 – Auto Sampler, interior
- P1010466 – Parshall Flume, grab sample location
- P1010467 – Parshall Flume, flow meter location
- P1010468 – Anaerobic Digesters
- P1010469 – Outfall

ATTACHMENT C

Effluent Exceedances

DMR Review Range: Oct 2, 2017 to Sep 30, 2022											Violation Code: E90		Last Refresh Date: Oct 24, 2022	
Facility Information				Facility Location				Last Formal Enforcement Action						
FRS Facility UIN		110008217508		LAT		46.369361		EA Identifier						
NPDES ID		WA0026123		LONG		-120.284083		Final Order Iss						
Permit Name		TOPPENISH, CITY OF		Permit Information				EA Type Desc						
Major/Minor		Minor						Original Issue Date		8/7/1997				
Permit SIC Desc		Sewerage Systems						Issue Date		11/19/2003				
Water Body Nam		Yakima River via Toppenish Drain						Effective Date		11/25/2003				
TMDL ID								Expiration Date		11/25/2008				
Number and Months of Violations						Permit Status		ADC						
580		19												
Month	Outfall	Parameter Code and Name		DMR Value	Permit Limit	% Exceed	Limit Type	#V	Due/Rec'd	#Dt				
Feb 2021	001 A	01094	Zinc, total recoverable	99.3	50.49 ug/L	97	MO AVG	28	3/20 3/23	3				
Feb 2021	001 A	01094	Zinc, total recoverable	120.	106. ug/L	13	DAILY MX	1	3/20 3/23	3				
Mar 2021	001 A	01094	Zinc, total recoverable	126.	50.49 ug/L	150	MO AVG	31	4/20 4/27	7				
Mar 2021	001 A	01094	Zinc, total recoverable	172.	106. ug/L	62	DAILY MX	1	4/20 4/27	7				
Apr 2021	001 A	01094	Zinc, total recoverable	101.63	50.49 ug/L	101	MO AVG	30	5/20 5/28	8				
Apr 2021	001 A	01094	Zinc, total recoverable	108.	106. ug/L	2	DAILY MX	1	5/20 5/28	8				
May 2021	001 A	01094	Zinc, total recoverable	104.33	57.4 ug/L	82	MO AVG	31	6/20 6/24	4				
Jun 2021	001 A	01094	Zinc, total recoverable	92.	57.4 ug/L	60	MO AVG	30	7/20 7/20					
Jul 2021	001 A	01094	Zinc, total recoverable	68.5	57.4 ug/L	19	MO AVG	31	8/20 8/20					
Aug 2021	001 A	01094	Zinc, total recoverable	74.	57.4 ug/L	29	MO AVG	31	9/20 9/20					
Sep 2021	001 A	01094	Zinc, total recoverable	72.25	57.4 ug/L	26	MO AVG	30	10/20 10/15					
Oct 2021	001 A	01094	Zinc, total recoverable	64.	50.49 ug/L	27	MO AVG	31	11/20 11/19					
Nov 2021	001 A	01094	Zinc, total recoverable	67.16	50.49 ug/L	33	MO AVG	30	12/20 12/20					
Dec 2021	001 A	01094	Zinc, total recoverable	59.	50.49 ug/L	17	MO AVG	31	1/20 1/20					
Jan 2022	001 A	01094	Zinc, total recoverable	61.	50.49 ug/L	21	MO AVG	31	2/20 2/18					
Feb 2022	001 A	01094	Zinc, total recoverable	88.	50.49 ug/L	74	MO AVG	28	3/20 3/28	8				
Mar 2022	001 A	01094	Zinc, total recoverable	70.5	50.49 ug/L	40	MO AVG	31	4/20 4/20					
Apr 2022	001 A	01094	Zinc, total recoverable	61.	50.49 ug/L	21	MO AVG	30	5/20 5/20					
May 2022	001 A	01094	Zinc, total recoverable	69.6	57.4 ug/L	21	MO AVG	31	6/20 6/17					
Jun 2022	001 A	01094	Zinc, total recoverable	71.4	57.4 ug/L	24	MO AVG	30	7/20 7/29	9				
Jul 2022	001 A	01094	Zinc, total recoverable	64.	57.4 ug/L	11	MO AVG	31	8/20 8/19					
Aug 2022	001 A	01094	Zinc, total recoverable	62.	57.4 ug/L	8	MO AVG	31	9/20 9/19					