LSASD Project ID: 23-0290

National Pollutant Discharge Elimination System National Compliance Initiative Compliance Sampling Inspection

Hunter Engineering Company

2489 Raymond Clinton Road
Raymond, MS

Project Date: July 18-19th, 2023

Report Date: September 15, 2023

Project Leader: Chris McHugh
Water Quality Section
Field Services Branch
Laboratory Services & Applied Science Division
USEPA – Region 4
980 College Station Road
Athens, Georgia 30605-2720

The ANSI National Accreditation Board attests that U.S. EPA Region 4 Laboratory Services and Applied Science Division fulfills the requirements of ISO/IEC 17025:2017 ANAB Forensic Testing & Calibration AR 3125:2019 in the field of Forensic Testing. The activities contained in this report fall within the scope of accreditation, Certificate Number: AT-2628. Expires 08 June 2024.

Project Requestor:

Jairo Castillo-Valenzuela, Supervisor
Wastewater Enforcement Section
Enforcement & Compliance Assurance Division
USEPA – Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-8960

Analytical Support:

Inorganic Chemistry Section
Laboratory Services Branch
Laboratory Services and Applied Science Division
980 College Station Rd Athens, GA 30605

Approvals:

Chris McHugh
Water Quality Section
Field Services Branch

Date

Approving Officials:

John Ruiz, Technical Reviewer
Water Quality Section
Field Services Branch

Date

Kevin Simmons, Acting Supervisor
Hazardous Waste Section
Field Services Branch

Date

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Introduction

On July 18th – 19th 2023, representatives of the U.S. Environmental Protection Agency (U.S. EPA) Region 4 Laboratory Services and Applied Science Division (LSASD) conducted a National Pollutant Discharge Elimination System (NPDES) compliance sampling inspection at the Hunter Engineering Company in Raymond, Mississippi. The evaluation was requested by the Enforcement & Compliance Assurance Division (ECAD) Water Enforcement Branch as part of the agency's goal to address significant non-compliance facilities. This inspection is a follow-up inspection to address outstanding questions derived from the previous ECAD and National Enforcement Investigations Center (NEIC) joint inspection earlier this year. The inspection followed the procedures listed in the LSASD Project No. 23-0290 Sample and Analysis Plan (SAP). There were no deviations from the SAP throughout the course of this inspection. All standard operating procedures used to conduct this assessment were followed as prescribed and are listed in the project's SAP. Inspection personnel are listed in Table 1.

Table 1 – Inspection Personnel

Name	Position Organization	Dates on site
Chris McHugh	Inspector U.S EPA Region 4 LSASD	July 18th-19th, 2023
Asher Sampong	Inspector U.S EPA Region 4 LSASD	July 18th-19th, 2023
Tristan Odekirk	Inspector U.S EPA Region 4 ECAD	July 18th, 2023

Background

Hunter Engineering Company is located at 2489 Raymond Clinton Road Raymond, MS, and is permitted by NPDES permit MSP090222 to discharge its pretreatment effluent from outfall labeled Outfall 001 to the Raymond POTW East MS0025852.

Study Area and Methodology

The study area for the sampling evaluation was the effluent discharge pipe (See Appendix A). A 24-hr composite sample was collected with an automatic composite sampler and analyzed for total Copper, zinc, Cadmium, Nickel, Chromium, Lead, and Silver. *In -situ* parameters of pH and temperature were measured with a multi-parameter meter. Analytical methods used during this study are Total Metals (TMTL) EPA 200.7 and 200.8.

Sample Analysis Results

Below are the analytical results for the sample collected at Outfall 001. The full analytical results listed below in Table 3 are included in the final report PDF portfolio. Results highlighted yellow denote detected analytes above the permit limit. A field blank sample was prepared with DI water to serve as a quality control check on potential sample interference due to sampler handling. No metals were detected above the method detection limit in the field blank.

Table 2: EPA Sample Results vs. Permitted Limits

Analyte	EPA Analytical Results	Permitted Limit	Sample ID/ Description	Sample Date and Time
Total Copper	10 µg/L* = .010 mg/L	0.100 mg/L Daily Maximum	23-0290-001 Outfall 001	7/18/23 11:25 am
Zinc	130 µg/L = .130 mg/L	1.6 mg/L Daily Maximum	23-0290-001 Outfall 001	7/18/23 11:25 am
Cadmium	0.25 µg/L* = .00025 mg/L	.003 mg/L Daily Maximum	23-0290-001 Outfall 001	7/18/23 11:25 am
Chromium	5.0 µg/L* = .005 mg/L	2.77 mg/L Daily Maximum	23-0290-001 Outfall 001	7/18/23 11:25 am
Nickel	16 µg/L = .016 mg/L	1.27 mg/L Daily Maximum	23-0290-001 Outfall 001	7/18/23 11:25 am
Lead	0.50 µg/L* = .005 mg/L	0.015 mg/L Daily Maximum	23-0290-001 Outfall 001	7/18/23 11:25 am
Silver**	33 µg/L = .033 mg/L	0.02 mg/L Daily Maximum	23-0290-001 Outfall 001	7/18/23 11:25 am
pH – In-situ	8.58 SU	5.0 S.U. < pH < 9.5	23-0290-001 Outfall 001	7/18/23 11:25 am
Temperature	37 C	NA	23-0290-001 Outfall 001	7/18/23 11:25 am

*U The analyte was not detected at or above the reporting limit.

** Permit exceedance

Table 3: EPA Sample Results of Incoming Source Water to Hunter Engineering Company

Analyte	EPA Analytical Results	Permitted Limit	Sample ID/ Description	Sample Date and Time
Total Copper	17 µg/L / 0.017 mg/L	NA	23-0290-0003 Incoming Source Water	7/18/23 11:40 am
Zinc	10 µg/L* = .010 mg/L	NA	23-0290-0003 Incoming Source Water	7/18/23 11:40 am
Cadmium	0.25 µg/L* = .00025 mg/L	NA	23-0290-0003 Incoming Source Water	7/18/23 11:40 am
Chromium	5.0 µg/L* = .005 mg/L	NA	23-0290-0003 Incoming Source Water	7/18/23 11:40 am
Nickel	10 µg/L* = .010 mg/L	NA	23-0290-0003 Incoming Source Water	7/18/23 11:40 am
Lead	1.2 µg/L / 0.0012 mg/L	NA	23-0290-0003 Incoming Source Water	7/18/23 11:40 am
Silver	5.0* µg/L = .005 mg/L	NA	23-0290-0003 Incoming Source Water	7/18/23 11:40 am
pH – In-situ	8.45 SU	NA	23-0290-0003 Incoming Source Water	7/18/23 11:40 am
Temperature	31.5 C	NA	23-0290-0003 Incoming Source Water	7/18/23 11:40 am

*U The analyte was not detected at or above the reporting limit.

Table 4: EPA Sample Results of Circuit Board Washing Process

Analyte	EPA Analytical Results	Permitted Limit	Sample ID/ Description	Sample Date and Time
Total Copper	10 µg/L* / 0.01 mg/L	NA	23-0290-0002 Circuit Board Wash Process	7/18/23 12:00 pm
Zinc	15 µg/L = .015 mg/L	NA	23-0290-0002 Circuit Board Wash Process	7/18/23 12:00 pm
Cadmium	0.25 µg/L* = .00025 mg/L	NA	23-0290-0002 Circuit Board Wash Process	7/18/23 12:00 pm
Chromium	5.0 µg/L* = .005 mg/L	NA	23-0290-0002 Circuit Board Wash Process	7/18/23 12:00 pm
Nickel	10 µg/L* = .010 mg/L	NA	23-0290-0002 Circuit Board Wash Process	7/18/23 12:00 pm
Lead	1.8 µg/L / 0.0018 mg/L	NA	23-0290-0002 Circuit Board Wash Process	7/18/23 12:00 pm
Silver	5.0* µg/L = .005 mg/L	NA	23-0290-0002 Circuit Board Wash Process	7/18/23 12:00 pm
pH – In-situ	7.6 SU	NA	23-0290-0002 Circuit Board Wash Process	7/18/23 12:00 pm
Temperature	30.5 C	NA	23-0290-0002 Circuit Board Wash Process	7/18/23 12:00 pm

*U The analyte was not detected at or above the reporting limit.

Table 5: EPA Sample Results of Field Blank DI Water

Analyte	EPA Analytical Results	Permitted Limit	Sample ID/ Description	Sample Date and Time
Total Copper	10 µg/L* / 0.01 mg/L	NA	23-0290-0004 Trip Blank/Field Blank DI water	7/18/23 12:15 pm
Zinc	10 µg/L* = .010 mg/L	NA	23-0290-0004 Trip Blank/Field Blank DI water	7/18/23 12:15 pm
Cadmium	0.25 µg/L* = .00025 mg/L	NA	23-0290-0004 Trip Blank/Field Blank DI water	7/18/23 12:15 pm
Chromium	5.0 µg/L* = .005 mg/L	NA	23-0290-0004 Trip Blank/Field Blank DI water	7/18/23 12:15 pm
Nickel	10 µg/L* = .010 mg/L	NA	23-0290-0004 Trip Blank/Field Blank DI water	7/18/23 12:15 pm
Lead	0.50 µg/L* = 0.0050 mg/L	NA	23-0290-0004 Trip Blank/Field Blank DI water	7/18/23 12:15 pm
Silver	5.0* µg/L = .005 mg/L	NA	23-0290-0004 Trip Blank/Field Blank DI water	7/18/23 12:15 pm

*U The analyte was not detected at or above the reporting limit.

Table 6: Analytical Results (See attached documents in PDF portfolio)

Analysis	Total Pages
Total Metals (TMTL)	11

Summary

Based on a pre-inspection meeting with EPA Region 4 ECAD, Region 8 NEIC, and the facility, the incoming source water to the facility was to be sampled to evaluate what metals maybe present in the source water from the city of Raymond, MS. The incoming source water to the plant had 0.017 mg/L of Copper and 0.0012 mg/L of Lead. Previous NPDES limit exceedances for Copper may be attributed in-part to the incoming source water Copper concentration. Additionally, the circuit board wash process was to be sampled to quantify what metals may be present in that discharge. Zinc (.015 mg/L) and Lead (0.0012 mg/L) were detected above the analytical results method detection limits but are not above the NPDES permit limits.

The outfall 001 discharge analytical result 0.033 mg/L for silver exceeded the daily maximum permit limit of 0.02 mg/L (Table 2).

Appendix A Photo Log

Figure 1: Outfall 001 Composite Sampler Set-up Taken 7/18/23 10:23 am

Figure 2: Circuit Washer Sampling Point. Taken 7/19/23 12:05 pm

End of Report

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
Laboratory Services & Applied Science Division
980 College Station Road
Athens, Georgia 30605-2720

September 15th, 2023

MEMORANDUM

SUBJECT: Hunter Engineering Final Report
Raymond, MS
LSASD Project ID: 23-0290

FROM: Chris McHugh
Environmental Engineer
Water Quality Section

THRU: Kevin Simmons, Acting Supervisor
Hazardous Waste Section

TO: Jairo Castillo-Valenzuela, P.E., Supervisor
Wastewater Enforcement Section Enforcement
& Compliance Assistance Division

Attached is the Final Report for the Hunter Engineering NPDES Compliance Sampling Inspection.

If you have any questions concerning the sampling event, please call me at 706-410-4082 or email me at mchugh.christopher@epa.gov.

Attachments:
cc (via email): Shelia Holiman, ECAD
Sandra Aker, LSASD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Laboratory Services and Applied Science Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 23-0290
Project: 23-0290, Hunter Engineering Company - Reported by Kristin Trapp

August 18, 2023

MEMORANDUM

SUBJECT: FINAL Analytical Report
Project: 23-0290, Hunter Engineering Company

FROM: Kristin Trapp
LSB Inorganic Chemistry Section Chief

THRU: Stacie Masters, Chief
Laboratory Services Branch

TO: Christopher McHugh

Attached are the final results for the analytical groups listed below. This report shall not be reproduced except in full without approval of the Region 4 laboratory. These analyses were performed in accordance with the Laboratory Services Branch's Laboratory Operations and Quality Assurance Manual (LSB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the LSB LOQAM specifications and have been qualified by this laboratory if the applicable quality control criteria were not met. Verification is defined in Chapter 5 of the LSB LOQAM. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses Included in this report:	Method Used:	Accreditations:
Total Metals (TMTL)		
Total Metals	EPA 200.7 (Water)	ISO/DW
Total Metals	EPA 200.8 (Water)	ISO/DW

Sample Disposal Policy

Due to limited space for long term sample storage, LSB's policy is to dispose of samples on a periodic schedule. Air samples collected in summa canisters will be disposed of 30 days following the issuance of this report. All other sample media including original samples, sample extracts and or digestates will be disposed of, in accordance with applicable regulations, 60 days from the date of this report.

This sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time. If samples require storage beyond the 60-day period, please contact the Sample Control Coordinator by e-mail at R4SampleCustody@epa.gov.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Laboratory Services and Applied Science Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 23-0290
Project: 23-0290, Hunter Engineering Company - Reported by Kristin Trapp

SAMPLES INCLUDED IN THIS REPORT

Project: 23-0290, Hunter Engineering Company

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
23-0290-0004	E232906-01	Trip Blank - Water	7/19/23 12:15	7/21/23 7:30
23-0290-0001	E232906-02	Wastewater	7/19/23 11:25	7/21/23 7:30
23-0290-0002	E232906-03	Wastewater	7/19/23 12:00	7/21/23 7:30
23-0290-0003	E232906-04	Water	7/19/23 11:40	7/21/23 7:30

DATA QUALIFIER DEFINITIONS

U The analyte was not detected at or above the reporting limit.

ACRONYMS AND ABBREVIATIONS

CAS Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

MDL Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.

MRL Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.

TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

ACCREDITATIONS:

ISO Accredited to ISO/IEC 17025:2017 and accreditation requirements for Forensic Science Testing Laboratories.

Refer to the certificate and scope of accreditation FT-0330 at:
http://www.epa.gov/aboutepa/about-region-4s-science-and-ecosystem-support-division-sesd

NR Not accredited for this test.

DW Accredited for conformance with ISO/IEC 17025:2017 and testing elements in the Fifth Edition of the Manual for the Certification of Laboratories Analyzing Drinking Water, EPA 815-R-05-004, 2005.

Refer to the certificate and scope of accreditation AT-2628 at:
http://www.epa.gov/aboutepa/about-region-4s-science-and-ecosystem-support-division-sesd

ISO/DW Accredited to ISO/IEC 17025:2017 and accreditation requirements for Forensic Science Testing Labs, and conformance with ISO/IEC 17025:2017 and testing elements in the Manual for the Certification of Laboratories Analyzing Drinking Water.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Laboratory Services and Applied Science Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 23-0290
Project: 23-0290, Hunter Engineering Company - Reported by Kristin Trapp

Total Metals

Project: 23-0290, Hunter Engineering Company

Sample ID: 23-0290-0004 **Lab ID:** E232906-01

Station ID: **Matrix:** Trip Blank - Water

Date Collected: 7/19/23 12:15

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7440-43-9	Cadmium	0.25	U	ug/L	0.25	7/25/23 10:08	8/16/23 16:56	EPA 200.8
7440-47-3	Chromium	5.0	U	ug/L	5.0	7/25/23 10:05	8/04/23 12:45	EPA 200.7
7440-50-8	Copper	10	U	ug/L	10	7/25/23 10:05	8/04/23 12:45	EPA 200.7
7439-92-1	Lead	0.50	U	ug/L	0.50	7/25/23 10:08	8/16/23 16:56	EPA 200.8
7440-02-0	Nickel	10	U	ug/L	10	7/25/23 10:05	8/04/23 12:45	EPA 200.7
7440-22-4	Silver	5.0	U	ug/L	5.0	7/25/23 10:05	8/04/23 12:45	EPA 200.7
7440-66-6	Zinc	10	U	ug/L	10	7/25/23 10:05	8/04/23 12:45	EPA 200.7

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Laboratory Services and Applied Science Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 23-0290
Project: 23-0290, Hunter Engineering Company - Reported by Kristin Trapp

Total Metals

Project: 23-0290, Hunter Engineering Company

Sample ID: 23-0290-0001 **Lab ID:** E232906-02

Station ID: 23-0290-0001 **Matrix:** Wastewater

Date Collected: 7/19/23 11:25

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7440-43-9	Cadmium	0.25	U	ug/L	0.25	7/25/23 10:08	8/16/23 17:02	EPA 200.8
7440-47-3	Chromium	5.0	U	ug/L	5.0	7/25/23 10:05	8/04/23 12:48	EPA 200.7
7440-50-8	Copper	10	U	ug/L	10	7/25/23 10:05	8/04/23 12:48	EPA 200.7
7439-92-1	Lead	0.50	U	ug/L	0.50	7/25/23 10:08	8/16/23 17:02	EPA 200.8
7440-02-0	Nickel	16		ug/L	10	7/25/23 10:05	8/04/23 12:48	EPA 200.7
7440-22-4	Silver	33		ug/L	5.0	7/25/23 10:05	8/04/23 12:48	EPA 200.7
7440-66-6	Zinc	130		ug/L	10	7/25/23 10:05	8/04/23 12:48	EPA 200.7

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Laboratory Services and Applied Science Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 23-0290
Project: 23-0290, Hunter Engineering Company - Reported by Kristin Trapp

Total Metals

Project: 23-0290, Hunter Engineering Company

Sample ID: 23-0290-0002 **Lab ID:** E232906-03

Station ID: 23-0290-0002 **Matrix:** Wastewater

Date Collected: 7/19/23 12:00

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7440-43-9	Cadmium	0.25	U	ug/L	0.25	7/25/23 10:08	8/16/23 17:22	EPA 200.8
7440-47-3	Chromium	5.0	U	ug/L	5.0	7/25/23 10:05	8/04/23 12:57	EPA 200.7
7440-50-8	Copper	10	U	ug/L	10	7/25/23 10:05	8/04/23 12:57	EPA 200.7
7439-92-1	Lead	1.8		ug/L	0.50	7/25/23 10:08	8/16/23 17:22	EPA 200.8
7440-02-0	Nickel	10	U	ug/L	10	7/25/23 10:05	8/04/23 12:57	EPA 200.7
7440-22-4	Silver	5.0	U	ug/L	5.0	7/25/23 10:05	8/04/23 12:57	EPA 200.7
7440-66-6	Zinc	15		ug/L	10	7/25/23 10:05	8/04/23 12:57	EPA 200.7

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 4 Laboratory Services and Applied Science Division
980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 23-0290
Project: 23-0290, Hunter Engineering Company - Reported by Kristin Trapp

Total Metals

Project: 23-0290, Hunter Engineering Company

Sample ID: 23-0290-0003 **Lab ID:** E232906-04

Station ID: 23-0290-0003 **Matrix:** Water

Date Collected: 7/19/23 11:40

CAS Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
7440-43-9	Cadmium	0.25	U	ug/L	0.25	7/25/23 10:08	8/16/23 17:29	EPA 200.8
7440-47-3	Chromium	5.0	U	ug/L	5.0	7/25/23 10:05	8/04/23 13:00	EPA 200.7
7440-50-8	Copper	17		ug/L	10	7/25/23 10:05	8/04/23 13:00	EPA 200.7
7439-92-1	Lead	1.2		ug/L	0.50	7/25/23 10:08	8/16/23 17:29	EPA 200.8
7440-02-0	Nickel	10	U	ug/L	10	7/25/23 10:05	8/04/23 13:00	EPA 200.7
7440-22-4	Silver	5.0	U	ug/L	5.0	7/25/23 10:05	8/04/23 13:00	EPA 200.7
7440-66-6	Zinc	10	U	ug/L	10	7/25/23 10:05	8/04/23 13:00	EPA 200.7

Total Metals (TMTL) - Quality Control
US-EPA, Region 4, LSASD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2307043 - M 200.2 Metals Water										
Blank (2307043-BLK1)				Prepared: 07/25/23 Analyzed: 08/04/23						
EPA 200.7										
Chromium	U	5.0	ug/L							U
Copper	U	10	"							U
Nickel	U	10	"							U
Silver	U	5.0	"							U
Zinc	U	10	"							U
LCS (2307043-BS1)				Prepared: 07/25/23 Analyzed: 08/04/23						
EPA 200.7										
Chromium	198.51	5.0	ug/L	200.00		99.3	85-115			
Copper	101.91	10	"	100.00		102	85-115			
Nickel	193.62	10	"	200.00		96.8	85-115			
Silver	80.511	5.0	"	80.000		101	85-115			
Zinc	194.71	10	"	200.00		97.4	85-115			
Matrix Spike (2307043-MS1)				**Source: E232906-02** Prepared: 07/25/23 Analyzed: 08/04/23						
EPA 200.7										
Chromium	211.56	5.0	ug/L	200.00	U	106	70-130			
Copper	115.11	10	"	100.00	9.3656	106	70-130			
Nickel	214.68	10	"	200.00	16.079	99.3	70-130			
Silver	117.44	5.0	"	80.000	32.964	106	70-130			
Zinc	339.80	10	"	200.00	129.81	105	70-130			
Matrix Spike Dup (2307043-MSD1)				**Source: E232906-02** Prepared: 07/25/23 Analyzed: 08/04/23						
EPA 200.7										
Chromium	210.97	5.0	ug/L	200.00	U	105	70-130	0.277	20	
Copper	121.37	10	"	100.00	9.3656	112	70-130	5.30	20	
Nickel	214.06	10	"	200.00	16.079	99.0	70-130	0.291	20	
Silver	114.98	5.0	"	80.000	32.964	103	70-130	2.11	20	
Zinc	338.18	10	"	200.00	129.81	104	70-130	0.477	20	
MRL Verification (2307043-PS1)				Prepared: 07/25/23 Analyzed: 08/04/23						
EPA 200.7										
Chromium	5.1186	5.0	ug/L	5.0000		102	70-130			MRL-1
Copper	9.7444	10	"	10.000		97.4	70-130			MRL-1, U
Nickel	12.016	10	"	10.000		120	70-130			MRL-1
Silver	5.1759	5.0	"	5.0000		104	70-130			MRL-1
Zinc	10.235	10	"	10.000		102	70-130			MRL-1

Total Metals (TMTL) - Quality Control

US-EPA, Region 4, LSASD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2307043 - M 200.2 Metals Water										
MRL Verification (2307043-PS1)				Prepared: 07/25/23 Analyzed: 08/04/23						
Batch 2307044 - M 200.2 Metals Water										
Blank (2307044-BLK1)				Prepared: 07/25/23 Analyzed: 08/16/23						
EPA 200.8										
Cadmium	U	0.25	ug/L							U
Lead	U	0.50	"							U
LCS (2307044-BS1)				Prepared: 07/25/23 Analyzed: 08/16/23						
EPA 200.8										
Cadmium	45.898	0.25	ug/L	50.000		91.8	85-115			
Lead	135.57	0.50	"	150.00		90.4	85-115			
Matrix Spike (2307044-MS1)	**Source: E232906-02**			Prepared: 07/25/23 Analyzed: 08/16/23						
EPA 200.8										
Cadmium	46.174	0.25	ug/L	50.000	0.19596	92.0	70-130			
Lead	140.55	0.50	"	150.00	0.42124	93.4	70-130			
Matrix Spike Dup (2307044-MSD1)	**Source: E232906-02**			Prepared: 07/25/23 Analyzed: 08/16/23						
EPA 200.8										
Cadmium	45.305	0.25	ug/L	50.000	0.19596	90.2	70-130	1.90	20	
Lead	141.33	0.50	"	150.00	0.42124	93.9	70-130	0.552	20	
MRL Verification (2307044-PS1)				Prepared: 07/25/23 Analyzed: 08/16/23						
EPA 200.8										
Cadmium	0.28004	0.25	ug/L	0.25000		112	65-135			MRL-2
Lead	0.48857	0.50	"	0.50000		97.7	65-135			MRL-2, U

Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit.
MRL-1	MRL verification for Potable Water matrix (Drinking Water)
MRL-2	MRL verification for Non-Potable Water matrix