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Seattle, WA 98103
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F: (206) 352-7178
info@fremontanalytical.com

Fulcrum Environmental Ryan Mathews 406 N. 2nd Street Yakima, WA 98901

RE: Kennewick School District - Washington Elementary Drinking W

Work Order Number: 1702137

February 14, 2017

Attention Ryan Mathews:

Fremont Analytical, Inc. received 14 sample(s) on 2/13/2017 for the analyses presented in the following report.

Drinking Water Metals by EPA Method 200.8

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

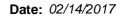
All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward Project Manager

DoD/ELAP Certification #L2371, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)





CLIENT: Fulcrum Environmental Work Order Sample Summary

Project: Kennewick School District - Washington Ele

Work Order: 1702137

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1702137-001	WE21117-P-CDF-11	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-002	WE21117-S-CDF-11	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-003	WE21117-T-CDF-11	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-004	WE21117-P-CDF-13	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-005	WE21117-S-CDF-13	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-006	WE21117-T-CDF-13	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-007	WE21117-P-OF-29	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-008	WE21117-S-OF-29	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-009	WE21117-T-OF-29	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-010	WE21117-P-CDF-32	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-011	WE21117-S-CDF-32	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-012	WE21117-T-CDF-32	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-013	WE21117-P-CF-38	02/10/2017 8:30 AM	02/13/2017 9:37 AM
1702137-014	WE21117-P-CF-39	02/10/2017 8:30 AM	02/13/2017 9:37 AM



Case Narrative

WO#: **1702137**Date: **2/14/2017**

CLIENT: Fulcrum Environmental

Project: Kennewick School District - Washington Elementary Drinking Water Sampling

WorkOrder Narrative:

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Prep Sample Comments:

1702137-001A 206694: Prep Comments for EPA200.8, Sample 1702137-001A: Turbidity: 0.27 NTU 1702137-004A 206698: Prep Comments for EPA200.8, Sample 1702137-004A: Turbidity: 0.21 NTU 1702137-007A 206699: Prep Comments for EPA200.8, Sample 1702137-007A: Turbidity: 0.07 NTU 1702137-010A 206700: Prep Comments for EPA200.8, Sample 1702137-010A: Turbidity: 0.08 NTU 1702137-013A 206701: Prep Comments for EPA200.8, Sample 1702137-013A: Turbidity: 0.00 NTU 1702137-014A 206702: Prep Comments for EPA200.8, Sample 1702137-014A: Turbidity: 0.00 NTU

Original



Qualifiers & Acronyms

WO#: **1702137**

Date Reported: **2/14/2017**

Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

Acronyms:

%Rec - Percent Recovery

CCB - Continued Calibration Blank

CCV - Continued Calibration Verification

DF - Dilution Factor

HEM - Hexane Extractable Material

ICV - Initial Calibration Verification

LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate

MB or MBLANK - Method Blank

MDL - Method Detection Limit

MS/MSD - Matrix Spike / Matrix Spike Duplicate

PDS - Post Digestion Spike

Ref Val - Reference Value

RL - Reporting Limit

RPD - Relative Percent Difference

SD - Serial Dilution

SGT - Silica Gel Treatment

SPK - Spike

Surr - Surrogate



Analytical Report

Work Order: 1702137

Date Reported: 2/14/2017

CLIENT: Fulcrum Environmental

Project: Kennewick School District - Washington Elementary Drinking Water Sam

Lab ID: 1702137-001 **Collection Date:** 2/10/2017 8:30:00 AM

Client Sample ID: WE21117-P-CDF-11 Matrix: Drinking Water

Analyses Result RL Qual Units DF Date Analyzed

<u>Drinking Water Metals by EPA Method 200.8</u>
Batch ID: 16210 Analyst: TN

Copper 678 0.500 µg/L 1 2/13/2017 4:11:47 PM

Lab ID: 1702137-004 **Collection Date:** 2/10/2017 8:30:00 AM

Client Sample ID: WE21117-P-CDF-13 Matrix: Drinking Water

Analyses Result RL Qual Units DF Date Analyzed

<u>Drinking Water Metals by EPA Method 200.8</u>

Batch ID: 16210 Analyst: TN

Copper $640 \quad 0.500 \quad \mu g/L \quad 1 \quad 2/13/2017 \; 4:36:45 \; PM$

Lab ID: 1702137-007 **Collection Date:** 2/10/2017 8:30:00 AM

Client Sample ID: WE21117-P-OF-29 Matrix: Drinking Water

Analyses Result RL Qual Units DF Date Analyzed

<u>Drinking Water Metals by EPA Method 200.8</u>

Batch ID: 16210

Analyst: TN

Copper 344 0.500 µg/L 1 2/13/2017 4:40:22 PM

Original



Analytical Report

Work Order: 1702137

Date Reported: 2/14/2017

CLIENT: Fulcrum Environmental

Project: Kennewick School District - Washington Elementary Drinking Water Sam

Lab ID: 1702137-010 **Collection Date:** 2/10/2017 8:30:00 AM

Client Sample ID: WE21117-P-CDF-32 Matrix: Drinking Water

Analyses Result RL Qual Units DF Date Analyzed

<u>Drinking Water Metals by EPA Method 200.8</u>

Batch ID: 16210

Analyst: TN

Copper 789 0.500 μg/L 1 2/13/2017 4:43:58 PM

Lab ID: 1702137-013 **Collection Date:** 2/10/2017 8:30:00 AM

Client Sample ID: WE21117-P-CF-38 Matrix: Drinking Water

Analyses Result RL Qual Units DF Date Analyzed

<u>Drinking Water Metals by EPA Method 200.8</u>
Batch ID: 16210 Analyst: TN

Copper 1,210 0.500 $\mu g/L$ 1 2/13/2017 4:47:34 PM

Lab ID: 1702137-014 **Collection Date:** 2/10/2017 8:30:00 AM

Client Sample ID: WE21117-P-CF-39 Matrix: Drinking Water

Analyses Result RL Qual Units DF Date Analyzed

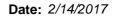
<u>Drinking Water Metals by EPA Method 200.8</u>

Batch ID: 16210

Analyst: TN

Copper ND 0.500 μg/L 1 2/13/2017 4:51:10 PM

Original





Work Order: 1702137

QC SUMMARY REPORT

CLIENT: Fulcrum Environmental

Project:	Kennewick S	School District - Was	hington E	Drinking Water Metals by EPA Method 200.8											
Sample ID	MB-16210	SampType: MBLK			Units: µg/L	Prep Date: 2/13/2017 RunNo: 34432									
Client ID:	MBLKW	Batch ID: 16210				Analysis Date: 2/13/2017 SeqNo: 657198									
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual									
Copper		ND	0.500												
Sample ID	LCS-16210	SampType: LCS			Units: µg/L	Prep Date: 2/13/2017 RunNo: 34432									
Client ID:	LCSW	Batch ID: 16210				Analysis Date: 2/13/2017 SeqNo: 657199									
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual									
Copper		93.2	0.500	100.0	0	93.2 85 115									
Sample ID	1702137-001ADUP	SampType: DUP			Units: µg/L	Prep Date: 2/13/2017 RunNo: 34432									
Client ID:	WE21117-P-CDF-11	Batch ID: 16210				Analysis Date: 2/13/2017 SeqNo: 657201									
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual									
Copper		676	0.500			677.5 0.160 30									
Sample ID	1702137-001AMS	SampType: MS			Units: µg/L	Prep Date: 2/13/2017 RunNo: 34432									
Client ID:	WE21117-P-CDF-11	Batch ID: 16210				Analysis Date: 2/13/2017 SeqNo: 657202									
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual									
Copper		869	0.500	200.0	677.5	95.8 70 130									
Sample ID	1702137-001AMSD	SampType: MSD			Units: µg/L	Prep Date: 2/13/2017 RunNo: 34432									
Client ID:	WE21117-P-CDF-11	Batch ID: 16210				Analysis Date: 2/13/2017 SeqNo: 657203									
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual									
Copper		830	0.500	200.0	677.5	76.3 70 130 869.0 4.57 30									

Original Page 7 of 10



Sample Log-In Check List

С	lient Name:	FE	Work Order Numb		
Lo	ogged by:	Erica Silva	Date Received:	2/13/2017	7 9:37:00 AM
Cha	in of Cust	<u>ody</u>			
1.	Is Chain of C	sustody complete?	Yes 🗸	No 🗌	Not Present
2.	How was the	sample delivered?	<u>FedEx</u>		
<u>Log</u>	ln .				
	Coolers are p	present?	Yes 🗹	No 🗌	na 🗆
4.	Shipping con	tainer/cooler in good condition?	Yes 🗸	No 🗌	
5.		ls present on shipping container/cooler? nments for Custody Seals not intact)	Yes	No 🗹	Not Required
6.	Was an atter	npt made to cool the samples?	Yes 🗸	No \square	NA 🗆
7.	Were all item	as received at a temperature of >0°C to 10.0°C*	Yes 🗸	No 🗆	na \square
8.	Sample(s) in	proper container(s)?	Yes 🗹	No 🗆	
9.	Sufficient sar	mple volume for indicated test(s)?	Yes 🗹	No 🗌	
10.	Are samples	properly preserved?	Yes 🗹	No \square	
11.	Was preserva	ative added to bottles?	Yes 🗹	No 🗌	NA \square
			\square	\Box	HNO3
		Ispace in the VOA vials?	Yes □	No 🗀	NA 🗸
13.	Did all sampl	es containers arrive in good condition(unbroken)?	Yes 🗹	No 🗀	
14.	Does paperw	ork match bottle labels?	Yes 🗹	No 🗀	
15.	Are matrices	correctly identified on Chain of Custody?	Yes 🗸	No \square	
16.	Is it clear wha	at analyses were requested?	Yes 🗸	No 🗌	
17.	Were all hold	ling times able to be met?	Yes 🗹	No 🗌	
Spe	cial Handl	ing (if applicable)			
18.	Was client no	otified of all discrepancies with this order?	Yes	No \square	NA 🗸
	Person	Notified: Date	e		
	By Who		It.	one Fax	In Person
	Regardi	·			
		nstructions:			
4.0		,			
19.	Additional re	marks: added to to 002A, 003A, 005A, 006A, 008A, 009A, 9	0114 0124		

Item Information

Item #	Temp ^o C
Cooler	1.3
Sample	1.1

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

3600 Fremont Ave N		
ont Ave N.		Tre
Tel: 206-352-3790	Analytica	mon
790		

Chain of Custody Record and Laboratory Services Agreement

	Analytical		Date: 2/1	11/2017 Laboratory Project No (internal):	1102151
3600 Fremont Ave N.	Tel: 206-352-3790			Page: 1 of:	ff 2
A MO SHOTTATHMASET	Fulcrum Environmental Consulting	Considerate and the second statements of the second	Project Name: Kennewick Scho	Kennewick School District - Washington Elementary Drinking Water Sampling	in the state of the state of
Address:	406 North Second Street	AND THE PROPERTY OF THE PROPER		Washington Elementary, Kennewick, WA	
City, State, Zip:	Yakima, WA 98901	Thousand of the following sypes of Asmag	Report To (PM): Ryan Mathews	moderna dameses, redirect dameses (mose)	Property of the page of the control of the property of the page of
Telephone:	509.574.0839 F	Fax: 509.545.8453	É	rmathews@efulcrum.net; cc: aenbysk@efulcrum.net	
A = Air,	lk, 0 = Other,	P = Product, S = Soil, SD = Sediment, SL = Solic	ng Water, GW	= Ground Water, SW = Storm Water, WW = Waste Water	te Water
sings and outbrembrane inchesion of legistic bloom mest use strating di trigit di 3V digla BORDMORTIL	Sample	Sample GS + GS	Soline to the local design of the local design	TON CONTROL OF THE PROPERTY OF	
WE21117-P-CDF-11	2/10/2017 8:30 AM	DW	×	Preserved	with HNOS
WE21117-S-CDF-11	2/10/2017	DW		Z = Z	0950 KO SE GEORGE DE LA REGIÓ NO ESTA SE COMO
WE21117-T-CDF-11	2/10/2017	DW		Hold	
WE21117-P-CDF-13	2/10/2017	DW	X	reserved 1	with HOUZ
WE21117-S-CDF-13	2/10/2017	DW			
WE21117-T-CDF-13	2/10/2017	DW OF STREET STREET	9	Hold	
WE21117-P-OF-29	2/10/2017	DW	X	Sursano)	SIF HOS
WE21117-S-OF-29	2/10/2017	DW		Hold	
WE21117-T-OF-29	2/10/2017	SHOW THE SERVICE COUNTY	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Fol	Server and Server section of Servers
WE21117-P-CDF-32	2/10/2017	DW - S - S - S - S - S - S - S - S - S -	X	"Teseswed	of With HUCK
**Metals Analysis (Circle):	: MTCA-5 RCRA-8 Priority Pollutants	lutants TAL Individual: Ag Al As	B Ba Be Ca Cd Co Cr Cy Fe	Pb S	U V Zn
***Anions (Circle): Nitrate	Nitrite Chloride	Sulfate Bromide O-Phosphate		received after 4:00pm will begin	On the Market of
Sample Disposal:	☐ Return to Client ☐ Disposa assesse	Disposal by Lab (Samples will be held for 30 days unless otherwise noted. A ree may be assessed if samples are retained after 30 days.)			LIOUSE KIRGINE MINISTERSEINE
I represent that I am au agreement to each of the	I represent that I am authorized to enter into this Agreement with Fremont agreement to each of the terms on the front and backside of this Agreement.	I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have agreement to each of the terms on the front and backside of this Agreement.	f the Client named above, that I have v	verified Client's	TA Alma
Relinquished ×	Date/Time	10:45AN ×	2 3 Date/Time	0937	
Relinquished	Date/Time	Received ×	Date/Time	TAT > SameDay^	fAT >> SameDay^ NextDay^ 2 Day 3 Day STD
×		×		Apploace coordinate with	the lak in advance

agreement to each of the terms on the front and backside of this Agreement.	I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's	Sample Disposal: Return to Client	***Anions (Circle): Nitrate Nitrite Chloride	**Metals Analysis (Circle): MTCA-5 RCRA-8	त्रको प्रतासनिका है। है 🌣 ्राव्ये घटे लक्ष्मेम्पडीर इंगीर काण्यु किया	energiques depresantes en compresantes de compresantes de la compresante del compresante della compres	्राप्त के जिस्सान में हैं जिस कर के हैं कि कार के किस कर है। जिस कर के अपने कर के जिस कर के जिस कर के जिस कर क	have the production and the second state (10)	Africa and the gament of the people Africa and the great and the great African and the second African and African	200 000 1	WE21117-P-CF-39 2/10/2017	WE21117-P-CF-38 2/10/2017	WE21117-T-CDF-32 2/10/2017	WE21117-S-CDF-32 2/10/2017	Sample Name Sample Date	*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O =	Telephone: 509.574.0839	City, State, Zip: Yakima, WA 98901	Address: 406 North Second Street	Client: Fulcrum Environmental Consulting	Seattle, WA 98103 Fax: 206-352-7178			
	is Agreement with Fremont Analyti backside of this Agreement.	- 22		Priority Pollutants TAL Indiv	mon volteemes nd dechadomist eq.					Section for	2017 OW	2017 DW	2017 DW	8:30M DW	Sample Type Time (Matrix)*	O = Other, P = Product, S = Soil, SD = Sediment,	Fax: 509.545.8453	enterpolitical contraction of side	Street	ental Consulting	3/90 -7178	Wanteday.		+
Received / /	ical on behalf of the Client named a	Disposal by Lab (Samples will be held for 30 days unless otherwise noted. A fee may be assessed if samples are retained after 30 days.)	O-Phosphate Fluoride Nitrate	Individual: Ag Al As B Ba Be Ca Cd (10 mg 20 mg		700							CG GO A SEG CAN SEG CA	SL = Solid, W = Water,	PM Email:	Report To (PM):	Location:	Project No:	Project Name:			Chain of Cu
Date/fime	above, that I have verified Client's		Nitrate+Nitrite Turn-around times for samples	Co Cr CuFe Hg K Mg Mn Mo Na Ni							X	×	The second secon		\$\\ \frac{\text{Configure}}{\text{Top}} \\ \text{Configure} \\ \text{Top} \\ Top	DW = Drinking Water, GW = Ground Water, SW :	rmathews@efulcrum.net; cc: aenbysk@efulcrum.net	Ryan Mathews	ntary, Kennewick,	162017.17	Kennewick School District - Wash		Date: 2/11/2017	stody Record and I
	(STE Pase 1	Special Remarks:	Pb Sb Se Sr Sn Ti Tl U V Zn		Terranga Berkangah ang manan jahanan 169 202 beranda at sungan		eutralescopes on the properties and service openine has been properties.	AND BEST OF THE WASTERN WASTER OF THE THE STATE OF THE ST	the second of the second to be seen as the second second second to be seen	of the contract of the second of the second of the contract of	Preserved with HNO31	Hold man remainded to the state of the state	まる	Comments	SW = Storm Water, WW = Waste Water	@efulcrum.net	matter arminer consequence terms to be greater or to a	, ,	17.17 Collected by: Newhon Boshon	raton Elementary Drinking Water Sampling		Laboratory Project No (internal): 17623	Chain of Custody Record and Laboratory Services Agreement