November 6, 2017

Kennewick School District No. 17
Attn: Keith Colee, Maintenance and Operations Manager
1000 West Fourth Avenue
Kennewick, Washington, 99336

RE: Winter 2016 Drinking Water Sampling Results
Cascade Elementary School, 505 South Highland Drive, Kennewick, Washington

Dear Keith:

On Thursday, December 22, 2016, Fulcrum Environmental Consulting, Inc. (Fulcrum) collected 47 drinking water samples for lead and copper analysis from Cascade Elementary School (School) located at 505 South Highland Drive in Kennewick, Washington. Initial sampling identified one fixture location with a lead concentration above guidance levels and nine fixture locations with copper concentrations above guidance levels. Fulcrum returned to the School on April 5, and May 20, 2017 to collect samples after remediation of the fixtures and laboratory results found concentrations to be below guidance levels. Sampling was completed as part of a District-wide project and all analysis was completed by Washington State Department of Ecology (Ecology) accredited laboratories.

Summary

The purpose of initial sampling was to evaluate current drinking water quality conditions with respect to lead and copper as a result of the increased national and local interest related to lead in drinking water. The intent of sampling was to meet the requirements of the pending regulations set forth in Washington Administrative Code (WAC) 246-366A-130 and 246-366A-135[1]. Consistent with the regulations, Fulcrum completed sampling at the rates of at least 50% of plumbing fixtures used regularly for drinking or cooking in elementary and preschools and at least 25% of drinking or cooking fixtures in middle schools, junior high schools, and high schools. In addition, Fulcrum sampled administrative facilities in the District at the same rate as elementary schools, of at least 50% of drinking and cooking fixtures.

Fulcrum completed initial sampling on December 22, 2016. Initial results identified one sample with a lead concentration of 49 micrograms per liter (µg/L), above the Environmental Protection Agency (EPA) action level of 15 µg/L, and nine samples with copper concentrations above the EPA action level of 1,300 µg/L. Upon receipt of results, the District removed the identified fixtures from service pending remediation and further testing.

The fixture identified with an elevated lead concentration was replaced and preconditioned by running cold water continuously through the fixture for 24 hours, as specified in WAC 246-366A-130. Following

[1] Washington State Department of Health, WAC 246-366A, *The Environmental Health and Safety Standards of Primary and Secondary Schools*, http://apps.leg.wa.gov/WAC/default.aspx?cite=246-366A, July 26, 2016

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replacement and preconditioning, Fulcrum returned to the School on April 5, 2017 and collected a follow-up sample to confirm the success of fixture replacement. No other fixtures of like style were replaced. The follow-up sample yielded results below the EPA action level, confirming fixture replacement was successful.

Copper is not a significant component in fixtures, but is the primary material in the plumbing system. To remediate elevated copper, the District aggressively flushed the fixtures with cold water to clear the plumbing of copper construction debris and installed filters on fixtures that did not respond to an aggressive flush. Fulcrum returned on April 5, and May 20, 2017 and collected samples to evaluate the success of the remediation. Follow-up samples found copper concentrations below the EPA action level, confirming the remediation was successful. Following sampling and review of laboratory results, Fulcrum recommended, and the District elected, to return the fixtures to service. Fulcrum recommended that the District replace all fixtures of like style to those initially identified with elevated lead.

As all samples now report concentrations below lead and copper action levels, at this time Fulcrum does not recommend any additional sampling. However, consistent with industry practice and the intent of WAC 246-366A, Fulcrum recommends that the District complete re-sampling of the building within the next five years (before December 2021). Additionally, if WAC 246-366A-130 is enacted, the regulations would require testing of all remaining fixtures within two years of the effective date (July 1, 2017). See Figure 1 in Attachment A for fixture locations and laboratory results.

Sampling Methodology

As a portion of this project, Fulcrum prepared a Sampling and Analysis Plan (SAP) intended to satisfy future initial sampling requirements under pending regulations.

For initial evaluation purposes, Fulcrum collected “first draw” samples. This “first draw” water volume consists of 250 milliliters (mL) and is intended to represent the water quality in the fixture, tubing connecting the fixture to the building piping, and potentially a portion of the building piping. If lead and copper are present, this first-draw sample typically contains the highest lead levels and indicates high copper from the associated building piping.

For most post-remediation evaluation sampling, Fulcrum collected three-part samples consisting of the first draw, “second draw”, and “third draw” water volumes. Second and third draw samples are intended to represent the water quality of building piping and plumbing components behind the fixture and the water entering the building from the water main.

As a quality control measure, Fulcrum also included a laboratory blank of distilled water and a laboratory “spike” sample with known concentrations of lead and copper at the selected action levels for the project during all sampling events. Blank and spike sample results are included in the results tables for reference.

Blank and spike samples were used to evaluate laboratory performance. The reported lead and copper concentrations of quality assurance samples provided a metric to determine accuracy of the analyses. If the reported concentration of the spike sample differed from the action level, then the spike sample

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concentration was used as the action level.

Field evaluation of pH and temperature of drinking water was completed during the cold water flush and immediately following sample collection on select fixtures during the initial sampling event as a general evaluation of water quality.

Sampling Activities

Fulcrum's two-part sampling process consisted of an initial site visit the prior afternoon/evening to locate and flush each water sampling location (fixture). Sample collection occurred the following morning, after the fixture sat motionless for more than eight but no less than 18 hours, typically approximately 14 hours.

Initial Sampling

On the initial visit, Fulcrum flushed cold water through each fixture selected for sampling for approximately one minute. Following the flush, each fixture was covered and secured within a plastic bag. The plastic bags were marked with signage indicating testing was in progress and the fixture should not be used. Fulcrum returned to the school eight to 18 hours later to collect the samples. Each sample consisted of the first draw collected into 250-mL unpreserved polyethylene bottles and was immediately placed on ice in a chilled cooler.

Samples collected from the initial sampling event were delivered under chain-of-custody to RJ Lee Group's Columbia Basin Analytical Laboratory (Ecology Lab ID: C859-16) in Pasco, Washington for analysis.

Fixture Replacement and Flushing

Fixtures identified with elevated lead concentrations were replaced and preconditioned by running cold water continuously through the fixture for 24 hours, as outlined in WAC 246-366A-130. Following replacement and preconditioning, Fulcrum collected follow-up samples to confirm the success of fixture replacement.

Fixtures producing elevated copper concentrations were generally identified in newer District buildings and were not associated with specific fixture styles. The relationship between building construction age and fixture styles indicates elevated copper concentrations are principally associated with construction debris in the plumbing system.

All fixtures with elevated copper were flushed aggressively by running water through the fixture at high flow with the aerator removed for approximately 30 minutes to clear the plumbing of any debris potentially causing elevated copper concentrations. Following an aggressive flush, fixtures were resampled to evaluate the effectiveness at reducing copper concentrations. The District elected to install filters, install signage indicating the fixtures should be used only for handwashing, or permanently removed from service fixtures that did not respond to an aggressive flush. Filtered fixtures were resampled following filter installation to verify effectiveness of the filter.

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Remedial Sampling

Remedial sampling typically consisted of first, second, and third draw samples from the fixture locations and plumbing system in question. First draw samples were collected into 250 mL polyethylene bottles preserved with nitric acid. The second draw water volume consists of water collected into a 250 mL unpreserved polyethylene container immediately following the first draw. No water was lost between collection of the first and second draw samples. The third draw water volume is a 1,000 mL sample collected into a one liter unpreserved polyethylene container after the fixture has been flushed for about three to five minutes.

Samples collected following remedial activities were shipped by common carrier under chain of custody to Fremont Analytical Laboratory (Ecology Lab ID: C910-16) in Seattle, Washington for analysis. Fremont was selected based on their availability to complete analysis on an expedited schedule.

Analytical Results

Samples from both initial and remedial sampling events were analyzed for lead and copper in drinking water by EPA Method 200.8.

Initial Sampling

Sample locations from the initial sampling event are presented in Figure 1 in Attachment A of this letter. A site-specific sampling and analysis plan (SSSAP) that provides a building specific summary of the location, number, and sampling frequency of water fixture locations is located in Attachment B. Initial analytical results are summarized in Table 1 located in Attachment C of this letter. Laboratory analytical results from the initial sampling event are located in Attachment D of this letter.

In addition, pH and temperature data from the initial sampling event is presented in Table 2 in Attachment C of this letter.

Remedial Sampling

Sample locations from remedial sampling events are presented in Figure 1 in Attachment A of this letter. The remedial analytical results from this project are summarized in Table 3 located in Attachment C of this letter. Laboratory analytical results from the remedial sampling event are located in Attachment E of this letter.

Discussion

Initial Sampling

Analytical results identified one sample, located in the Library Work Room, with a lead concentration of 49 µg/L, above the EPA action level of 15 µg/L, and nine samples with copper concentrations above the EPA action level of 1,300 µg/L.

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Remedial Sampling

Immediately following receipt of initial sampling results, the District removed the identified fixtures from service pending remediation and further testing. To remediate elevated lead concentrations, the District replaced the identified fixture. Fulcrum returned on April 5, 2017 following fixture replacement and preconditioning to collect follow-up samples from the initially identified fixture. No other fixtures of like style were replaced. See Attachment F for a photograph layout with the identified fixture style.

To remediate elevated copper concentrations, the District completed an aggressive flush of the identified fixtures. The District installed filters on fixtures that did not respond to an aggressive flush. Fulcrum returned on the morning following the aggressive flush and filter installation, April 5, and May 20, 2017, to collect follow-up samples from the fixtures.

Analytical results from remedial sampling indicated the fixture replacement, aggressive flushing, and filter installation were successful at reducing lead and copper concentrations below action levels for the fixtures in question.

Recommendations

One initial sample contained lead above the EPA action level of 15 µg/L and nine initial samples contained copper above the EPA action level of 1,300 µg/L. The District replaced the identified fixture with elevated lead and preconditioned the fixture for 24 hours as specified in WAC 246-366A-130. The District completed an aggressive flush of the fixtures identified with elevated copper and installed filters on fixtures that did not respond to an aggressive flush. Follow-up sampling demonstrated that all lead and copper concentrations were below action levels. Following remedial sampling and review of laboratory results, Fulcrum recommended, and the District elected, to return the fixtures to service. Fulcrum recommends the District replace all fixtures of like style to those initially identified with elevated lead. See Attachment F for a photograph layout of the identified fixture style.

As all samples now report concentrations below lead and copper action levels, Fulcrum does not recommend any additional sampling at this time. However, consistent with industry practice and the intent of WAC 246-366A, Fulcrum recommends that the District complete re-sampling of the building within the next five years (before December 2021). Additionally, if WAC 246-366A-130 is enacted, the regulations would require testing of all remaining fixtures within two years of the effective date (July 1, 2017).

If you have any questions, please feel free to contact me at (509) 574-0839.

Sincerely,

Amanda Enbysk, GIT
Environmental Geologist

Ryan K. Mathews, CIH, CHMM
Principal

THE AMERICAN BOARD OF INDUSTRIAL HYGIENE INCORPORATED
CERTIFICATION NUMBER 9916 CP
EXPIRES 12-1-2021
PENNSYLVANIA · 1960
RYAN K. MATHEWS, CIH

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ATTACHMENT A

Figure 1: Sample Location Map

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LEGEND

KF-## - Kitchen faucet

CF-## - Classroom faucet

CDF-## - Classroom drinking fountain

OF-## - Office faucet

WC-## - Water cooler fountain

BF-## - Bottle filler fountain

NF-## - Nurse's faucet

- Sample location: faucet
- Sample location: drinking fountain at sink
- Sample location: faucet and drinking fountain at same sink
- Sample location: water cooler fountain

-Lead (Pb) and copper (Cu) results for each sample location are below each identifier. All results reported in µg/L.

-Samples in **BOLD RED** indicate fixture locations where the initial concentrations of lead or copper were above the respective action level.

KF-03		
Sampling Event	Pb	Cu
Initial (12/22/16)	4	2,200
4/5/17: Aggressive Flush	-	936

KF-02		
Sampling Event	Pb	Cu
Initial (12/22/16)	4	1,400
4/5/17: Aggressive Flush	-	716

KF-01		
Sampling Event	Pb	Cu
Initial (12/22/16)	4	1,800
4/5/17: Aggressive Flush	-	933

	OF-08	CDF-09
Sampling Event		
Lead Results		
Initial (12/22/16)	49	<1.0
4/5/17: Fixture Replaced	2.62	-
Copper Results		
Initial (12/22/16)	2,300	1,500
4/5/17: Aggressive Flush	683	1,030

CDF-45		
Sampling Event	Pb	Cu
Initial (12/22/16)	<1.0	1,600
4/5/17: Aggressive Flush	-	1,400
5/20/17: Filter Installed	-	79.7

CDF-44		
Sampling Event	Pb	Cu
Initial (12/22/16)	<1.0	1,800
4/5/17: Aggressive Flush	-	1,190

	CF-25	CDF-26
Sampling Event		
Lead Results		
Initial (12/22/16)	7	<1.0
Copper Results		
Initial (12/22/16)	2,200	840
4/5/17: Aggressive Flush	567	-

	CDF-27	CF-28
Sampling Event		
Lead Results		
Initial (12/22/16)	<1.0	7
Copper Results		
Initial (12/22/16)	830	2,500
4/5/17: Aggressive Flush	-	1,010

Drawing provided by Kennewick School District

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Kennewick SD Drinking Water Sampling. 162017.00. AME. 11022017

Cascade Elementary School
505 South Highland Drive
Kennewick, Washington

Sample Location Map

FIGURE 1

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ATTACHMENT B

Site-Specific Sampling and Analysis Plan

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Site-Specific Sampling and Analysis Plan

Kennewick School District – Winter 2016 Drinking Water Sampling

Note: This SSSAP has been prepared as a supplement to the project SAP/QAPP and provide a building specific summary of the location, number, and sampling frequency of water fixture locations.

Campus/Building: Cascade Elementary Address: 505 South Highland Drive, Kennewick, WA

☑ Elementary ☐ Middle School ☐ High School ☐ Administration

Date of Construction: 1982 Modernizations: 2013

Fixture Type	Locations	Fixture Styles[1]	Samples	Ratio
Drinking fountain/water cooler (DF/WC)	8	1	4	50%
Kitchen Fixture (KF)	5	4	5	100%
Classroom faucet, including faucets in Food Labs and Life Sciences Classrooms (CF)	25	3	20	80%
Classroom drinking fountain at sink (CDF)	28	1	14	50%
Nurse's Office/Health Room (NF)	1	1	1	100%
Teacher's Lounges/Work Rooms (OF)	3	2	3	100%
TOTALS	**70**		**47**	**67%**

1 Fixture styles are approximate based on sampler's observations

Lead Sampler: Kyle Ames Date: 12/22/2016

Sample Prefix: CCE – 122216 – P (first-draw) – _____ – 01-49

School Code *Date* *Sample Type* *Fixture Type* *Sample Number*

Laboratory: R. J. Lee Group, Columbia Basin Analytical Delivery Date: December 22, 2016

Comments:

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ATTACHMENT C

Table 1: Initial Sampling Analytical Results Summary Table
Table 2: pH and Temperature Data Summary Table
Table 3: Remedial Sampling Analytical Results Summary Table

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Table 1: Initial Sampling Analytical Results Summary

Sample Identification and Location	Fixture Type	Lead Results (µg/L)	Copper Results (µg/L)
CCE122216-P-KF-01: Kitchen, E. wall, south fixture	**Kitchen Faucet**	4	**1,800**
CCE122216-P-KF-02: Kitchen, E. wall, north fixture	**Kitchen Faucet**	4	**1,400**
CCE122216-P-KF-03: Kitchen, N. middle handwash station	**Kitchen Faucet**	4	**2,200**
CCE122216-P-KF-04: Kitchen - north wall, food prep sink	Kitchen Faucet	1	1,300
CCE122216-P-KF-05: Kitchen - north wall, hand wash station	Kitchen Faucet	<1.0	880
CCE122216-P-WC-06: Multipurpose/Cafeteria	Water Cooler Fountain	<1.0	380
CCE122216-P-CF-07: Music Room; Room 195	Classroom Faucet	3	980
CCE122216-P-OF-08: Library Work Room	**Office Faucet**	**49**	**2,300**
CCE122216-P-CDF-09: Library Work Room	**Classroom Drinking Fountain**	<1.0	**1,500**
CCE122216-P-NF-10: Health Room	Nurse's Faucet	2	900
CCE122216-P-CDF-11: Health Room	Classroom Drinking Fountain	<1.0	1,200
CCE122216-P-CDF-12: Classroom 1	Classroom Drinking Fountain	1	1,200
CCE122216-P-CF-13: Classroom 2	Classroom Faucet	<1.0	1,000
CCE122216-P-CDF-14: Classroom 3	Classroom Drinking Fountain	<1.0	1,000
CCE122216-P-CF-15: Classroom 3	Classroom Faucet	1	910
CCE122216-P-CF-16: Classroom 4	Classroom Faucet	<1.0	1,000
CCE122216-P-CDF-17: Classroom 5	Classroom Drinking Fountain	<1.0	1,100
CCE122216-P-CF-18: Classroom 5	Classroom Faucet	2	940
CCE122216-P-WC-19: Corridor opposite Classroom 6	Water Cooler Fountain	1	570
CCE122216-P-CF-20: Classroom 6	Classroom Faucet	1	880
CCE122216-P-CDF-21: Classroom 6	Classroom Drinking Fountain	<1.0	1,100
CCE122216-P-CDF-22: Classroom 7	Classroom Drinking Fountain	<1.0	1,300
CCE122216-P-CF-23: Classroom 7	Classroom Faucet	<1.0	830
CCE122216-P-KF-24: Staff Lounge	Office Faucet	3	1,200
CCE122216-P-CF-25: Classroom 8	**Classroom Faucet**	7	**2,200**
CCE122216-P-CDF-26: Classroom 8	Classroom Drinking Fountain	<1.0	840
CCE122216-P-CDF-27: Classroom 9	Classroom Drinking Fountain	<1.0	830
CCE122216-P-CF-28: Classroom 9	**Classroom Faucet**	7	**2,500**
CCE122216-P-CF-29: Classroom 10	Classroom Faucet	<1.0	910
CCE122216-P-CDF-30: Classroom 14	Classroom Drinking Fountain	<1.0	960
CCE122216-P-CF-31: Classroom 14	Classroom Faucet	<1.0	910
CCE122216-P-CF-32: Classroom 11, Resource Room	Classroom Faucet	<1.0	1,200
CCE122216-P-CDF-33: Classroom 11, Resource Room	Classroom Drinking Fountain	<1.0	1,200
CCE122216-P-OF-34: Classroom 12, Title Room	Classroom Faucet	<1.0	1,100
CCE122216-P-CDF-35: Classroom 15	Classroom Drinking Fountain	<1.0	1,100
CCE122216-P-CF-36: Classroom 15	Classroom Faucet	<1.0	1,200
CCE122216-P-CF-37: Classroom 16	Classroom Faucet	<1.0	1,100
CCE122216-P-CF-38: Classroom 17	Classroom Faucet	<1.0	840
CCE122216-P-CF-39: Classroom 18	Classroom Faucet	1	900
CCE122216-P-CF-40: Classroom 19	Classroom Faucet	<1.0	1,000
CCE122216-P-CF-41: Classroom 20	Classroom Faucet	<1.0	880
CCE122216-P-CF-42: Classroom 21	Classroom Faucet	2	780

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Sample Identification and Location	Fixture Type	Lead Results (µg/L)	Copper Results (µg/L)
CCE122216-P-OF-43: Staff Workroom	Office Faucet	<1.0	1,200
CCE122216-P-CDF-44: Classroom 22	**Classroom Drinking Fountain**	<1.0	**1,800**
CCE122216-P-CDF-45: Classroom 23	**Classroom Drinking Fountain**	<1.0	**1,600**
CCE122216-P-WC-46: Corridor opposite Classroom 23	Water Cooler Fountain	<1.0	690
CCE122216-P-WC-47: Gymnasium	Water Cooler Fountain	<1.0	550
CCE122216-P-WC-48: Laboratory Blank	*Distilled Water Blank*	*<1.0*	*<10*
CCE122216-P-WC-49: Laboratory Spike	*Lead and Copper Spike*	*15*	*1,400*
EPA Action Level		**15**	**1,300**

1 µg/L means microgram per liter or parts per billion (ppb).

2 Action levels based on the U.S. EPA's Lead and Copper Rule.

Results in **bold** indicate concentrations above the action levels of 15 µg/L for lead and 1,300 µg/L for copper

Results in *italics* are quality assurance spike and blank samples

Table 2: pH and Temperature Data Summary

Sample Number	Fixture Type	pH Flush	pH Sample	Temperature (°C) Flush	Temperature (°C) Sample
CCE122216-P-KF-04: Kitchen - north wall, food prep sink	Kitchen Faucet	8.01	7.10	18.3	21.0
CCE122216-P-OF-08: Library Work Room	Classroom Drinking Fountain	7.95	7.00	19.3	20.9
CCE122216-P-CDF-12: Classroom 1 (102)	Classroom Drinking Fountain	7.83	7.11	20.9	20.0
CCE122216-P-CF-16: Classroom 4 (108)	Classroom Faucet	7.76	7.09	21.2	20.9
CCE122216-P-CF-20: Room 112	Classroom Faucet	7.91	7.20	20.9	15.7
CCE122216-P-KF-24: Room 117	Kitchen Faucet	7.94	7.10	21.0	21.1
CCE122216-P-CF-28: Room 120	Classroom Faucet	7.95	-	18.5	-
CCE122216-P-CF-32: Room 145	Classroom Faucet	7.83	7.13	20.5	21.0
CCE122216-P-CF-36: Room 140	Classroom Faucet	6.98	7.06	20.2	20.1
CCE122216-P-CF-40: Room 150	Classroom Faucet	7.03	7.11	21.9	20.9

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Table 3: Remedial Sampling Analytical Results Summary

Sampling Event	Sample identification										
	KF-01	KF-02	KF-03	OF-08	CDF-09	CF-25	CF-28	CDF-44	CDF-45	*Laboratory Blank (-48)*	*Laboratory Spike (-49)*
Lead Results											
Initial (12/22/16)	4	4	4	**49**	<1.0	7	7	<1.0	<1.0	*<1.0*	*15*
Fixture Replaced (4/5/17)	-	-	-	2.62	-	-	-	-	-	*<1.00*	*15.3*
EPA Action Level	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**	**15**
Copper Results											
Initial (12/22/16)	**1,800**	**1,400**	**2,200**	**2,300**	**1,500**	**2,200**	**2,500**	**1,800**	**1,600**	*<10*	*1,400*
Aggressive Flush (4/5/17)	933	716	936	683	1,030	567	1,010	1,190	**1,400**	*0.505*	*1,290*
Filter Installation (5/20/17)	-	-	-	-	-	-	-	-	79.7	-	*1,400*
EPA Action Level	**1,300**	**1,300**	**1,300**	**1,300**	**1,300**	**1,300**	**1,300**	**1,300**	**1,300**	**1,300**	**1,300**

1 Results reported in micrograms per liter (µg/L) or parts per billion (ppb).

2 Action levels based on the U.S. EPA's Lead and Copper Rule.

Results indicated in **bold** indicate concentrations above the action levels of 15 µg/L for lead and 1,300 µg/L for copper

Results indicated in *italics* are quality assurance spike and blank samples

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ATTACHMENT D

Initial Analytical Results

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RJ Lee*Group*, Inc. | Columbia Basin Analytical Laboratories
2710 North 20th Avenue, Pasco WA 99301
Tel: (509) 545-4989 | Fax: (509) 544-6010

Fulcrum Environmental
406 N. 2nd St.
Yakima, WA 98901

Subject: Chemical Analysis Report

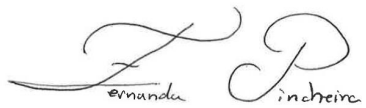
Columbia Basin Analytical Laboratories received 49 sample(s) on 12/22/16 for analysis. These sample(s) have been assigned a login order number of W612125. Enclosed is the final report that consists of a summary report of the sample(s), and a copy of the chain of custody.

General Lab Comments

The results provided in this report relate only to the items tested. Sample(s) were received in acceptable conditions unless otherwise noted in the comments above. Sample(s) have not been field blank corrected unless otherwise noted in the general set comments above. The sample(s) were prepared in accordance with EPA 200.8 and analyzed in compliance with EPA 200.8. This test report shall not be reproduced, except in full, without written approval of Columbia Basin Analytical Laboratories. Any questions, please contact our office.

All samples were diluted 1:10. Samples that exceeded the instrument calibration range were rerun at a 1:100 dilution, necessitating a 10-fold increase in the PQL. Each is noted with an "X" qualifier.

Release of the data contained in the hard copy report has been authorized by the Laboratory Director or a designee as verified by the following signature. This report has been administratively reviewed by the following individual:



02/22/17

Project Coordinator II, M. Fernanda Pincheira — Date

If you have any questions please feel free to contact Fernanda Pincheira at MPincheira@rjleegroup.com.

RJ LEE GROUP

Laboratory Report

Ryan Mathews

Fulcrum Environmental
406 N. 2nd St.
Yakima, WA 98901

Client Project:

Fulcrum Kennewick

RJ Lee Group No.: W612125
COC No.: Kennewick
Samples Received: 12/22/16
Analysis/Prep Date: 02/20/17
Report Date: 02/22/17

Sample Name: CCE122216-P-KF-01 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-01 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.8	0.1	X
Lead	EPA 200.8	0.004	0.001	

Sample Name: CCE122216-P-KF-02 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-02 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.4	0.1	X
Lead	EPA 200.8	0.004	0.001	

Sample Name: CCE122216-P-KF-03 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-03 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.2	0.1	X
Lead	EPA 200.8	0.004	0.001	

Sample Name: CCE122216-P-KF-04 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-04 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.3	0.1	X
Lead	EPA 200.8	0.001	0.001	

Sample Name: CCE122216-P-KF-05 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-05 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.88	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

RJ LEE GROUP

Sample Name: CCE122216-P-WC-06 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-06 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.38	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CF-07 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-07 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.98	0.01	
Lead	EPA 200.8	0.003	0.001	

Sample Name: CCE122216-P-OF-08 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-08 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.3	0.1	X
Lead	EPA 200.8	0.049	0.001	

Sample Name: CCE122216-P-CDF-09 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-09 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.5	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-NF-10 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-10 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.90	0.01	
Lead	EPA 200.8	0.002	0.001	

Sample Name: CCE122216-P-CDF-11 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-11 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.2	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

RJ LEE GROUP

Sample Name: CCE122216-P-CDF-12 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-12 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.2	0.1	X
Lead	EPA 200.8	0.001	0.001	

Sample Name: CCE122216-P-CF-13 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-13 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.0	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CDF-14 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-14 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.00	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CF-15 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-15 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.91	0.01	
Lead	EPA 200.8	0.001	0.001	

Sample Name: CCE122216-P-CF-16 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-16 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.0	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CDF-17 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-17 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.1	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

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Sample Name: CCE122216-P-CF-18 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-18 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.94	0.01	
Lead	EPA 200.8	0.002	0.001	

Sample Name: CCE122216-P-WC-19 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-19 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.57	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CF-20 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-20 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.88	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CDF-21 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-21 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.1	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CDF-22 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-22 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.3	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CF-23 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-23 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.83	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

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Sample Name: CCE122216-P-KF-24 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-24 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.2	0.1	X
Lead	EPA 200.8	0.003	0.001	

Sample Name: CCE122216-P-CF-25 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-25 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.2	0.1	X
Lead	EPA 200.8	0.007	0.001	

Sample Name: CCE122216-P-CDF-26 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-26 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.84	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CDF-27 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-27 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.83	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CF-28 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-28 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.5	0.1	X
Lead	EPA 200.8	0.007	0.001	

Sample Name: CCE122216-P-CF-29 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-29 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.91	0.01	
Lead	EPA 200.8	0.001	0.001	

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Sample Name: CCE122216-P-CDF-30 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-30 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.96	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CF-31 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-31 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.91	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CF-32 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-32 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.2	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CDF-33 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-33 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.2	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-OF-34 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-34 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.1	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CDF-35 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-35 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.1	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

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Sample Name: CCE122216-P-CF-36 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-36 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.2	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CF-37 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-37 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.1	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CF-38 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-38 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.84	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CF-39 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-39 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.9	0.1	X
Lead	EPA 200.8	0.001	0.001	

Sample Name: CCE122216-P-CF-40 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-40 **Date Analyzed:** 02/20/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.0	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CF-41 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-41 **Date Analyzed:** 02/22/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.88	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

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Sample Name: CCE122216-P-CF-42 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-42 **Date Analyzed:** 02/22/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.78	0.01	
Lead	EPA 200.8	0.002	0.001	

Sample Name: CCE122216-P-OF-43 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-43 **Date Analyzed:** 02/22/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.2	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CDF-44 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-44 **Date Analyzed:** 02/22/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.8	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-CDF-45 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-45 **Date Analyzed:** 02/22/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.6	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-WC-46 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-46 **Date Analyzed:** 02/22/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.69	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-WC-47 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-47 **Date Analyzed:** 02/22/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.55	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

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Sample Name: CCE122216-P-WC-48 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-48 **Date Analyzed:** 02/22/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	< 0.010	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: CCE122216-P-WC-49 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612125-49 **Date Analyzed:** 02/22/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.4	0.1	X
Lead	EPA 200.8	0.015	0.001	

Report Qualifiers:
A = Target Analyte media breakthrough suspect, see analytical report
B = Analyte detected in the associated blank
D = Analyte analyzed in a dilution
d = Data that exceeds the RSD criteria set by the SOP
E = Report concentration was above the instrument calibration range
H = Holding times for preparation or analysis exceeded
J = Analyte detected below quantitation limits, concentration is estimated
L = Sample condition at receipt out of compliance with method defined conditions
P = Library spectrum match, rsd >90% w RT match
Q = Result out of method specific acceptance QC criteria
R = RPD (relative percent difference) outside accepted recovery limits
S = Spike Recovery outside accepted recovery limits
U = Analyte analyzed for but not detected
Z = Not ELAP accredited analyte
N/A = Not Applicable
ND = Not Detected

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Request for Environmental and IH Laboratory Analytical Services

W612125

ATTENTION TO:	RYAN MATHEWS	Purchase Order No.:	Client Job No.: 162017

Lab Use Only	Project No.:	Client No:	
	Date Logged In:	Logged In By:	
Report Results To	Name: Amanda Enbysk, Ryan Mathews		
	Company: Fulcrum Environmental Consulting		
	Address: 406 North 2nd Street		
	City, State, Zip: Yakima, WA, 98901		
	Phone: (509) 574-0839	Fax: (509) 575-8453	
	Call with Verbal Results:		
	Email Results To: aenbysk@efulcrum.net, **CC:** rmathews@efulcrum.net		
	Fax Results To:		
Send Invoice To	Name: Lorrie Boutillier		
	Company: Fulcrum Environmental	Email: lboutillier@efulcrum.net	
	Address: 406 North 2nd Street		
	City, State, Zip: Yakima, WA, 98901		
	Phone: (509) 574-0839	Fax: (509) 575-8453	
Special Instructions			

Turnaround Request: Standard: Yes No — If 'No,' No. of Business Days:

Drinking Water Sample Only: Sample Purpose: Information X Regulatory □ — Accreditation (please list below):
System ID #:
DOH Source #:
Multiple Sources #s:
Sample Purpose: A □ B □ Other □

Chemistry Analysis Key

Preservation:		Matrix:		Container:
Unpres	H_2SO_4	WW=Wastewater	SW=Surface Water	P=Plastic
4°C	HCl	GW=Groudwater	DW=Drinking Water	G=Glass
HNO_3	NaOH	S=Soil/Sludge	O=Oil	W=Wipe
Other	Na_2SO_4	E=Extract	X=Other	A=Air (filter or tube)

Client Sample ID	Sample Description	Sample Date	Sample Time Start	Sample Time Stop	Wipe Area / Air Volume	Analysis Requested: EPA 200.8: Pb, Cu	Pres. Upon Receipt (Y/N)	Preservation	Matrix	Container Type	pH	No. Containers
CCE122216-P-Kf-01	Kitchen fixture	12-22				X		UNPR	DW	P		17.4
CCE122216-P-Kf-02	↓	↓				↓		↓	↓	↓		18.0
CCE122216-P-Kf-03												18.0
CCE122216-P-Kf-04												17.4
CCE122216-P-Kf-05	↓											17.8
CCE122216-P-WC-06	Room 190											17.4
CCE122216-P-Cf-07	Room 195											17.5
CCE122216-P-Of-08	library work room											18.0
CCE122216-P-Cdf-09	library Workroom											18.4
CCE122216-P-Nf-10	Nurse sink											18.4
CCE122216-P-Cdf-11	Nurse drinkft	↓				↓		↓	↓	↓		18.4

Chain of Custody	Relinquished By (Signature):	Date: 12-22-16 Time: 1300	
	Relinquished By (Print Name): Kyle Ames	Relinquished To:	
	Company Name: Fulcrum	Method of Shipment:	
Chain of Custody	Relinquished By (Signature):	Date: Time:	
	Relinquished By (Print Name):	Relinquished To:	
	Company Name:	Method of Shipment:	

Chain of Custody	Received By (Signature):	Date: DEC 22 2016 Time: 13	
	Received By (Print Name):	Relinquished To:	
	Company Name:	Method of Shipment:	
Chain of Custody	Received By (Signature):	Date: Time:	
	Received By (Print Name):	Relinquished To:	
	Company Name:	Method of Shipment:	

Pennsylvania - HQ
350 Hochberg Road
Monroeville, PA 15146

724.325.1776 **Phone**
724.733.1799 **Fax**

Washington
Columbia Basin Analytical Laboratories
2710 North 20th Avenue
Pasco, WA 99301

509.545.4989 **Phone**
509.544.6010 **Fax**

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Request for Environmental and IH Laboratory Analytical Services

W612125, Page 12 of 15

ATTENTION TO:	**RYAN MATHEWS**	Purchase Order No.:	Client Job No.: **162017**

Lab Use Only	Project No.:	Client No:
	Date Logged In:	Logged In By:
Report Results To	Name: Amanda Enbysk, Ryan Mathews	
	Company: Fulcrum Environmental Consulting	
	Address: 406 North 2nd Street	
	City, State, Zip: Yakima, WA, 98901	
	Phone: (509) 574-0839 Fax: (509) 575-8453	
	Call with Verbal Results:	
	Email Results To: aenbysk@efulcrum.net, CC: rmathews@efulcrum.net	
	Fax Results To:	
Send Invoice To	Name: Lorrie Boutillier	
	Company: Fulcrum Environmental Email: lboutillier@efulcrum.net	
	Address: 406 North 2nd Street	
	City, State, Zip: Yakima, WA, 98901	
	Phone: (509) 574-0839 Fax: (509) 575-8453	
Special Instructions		

Turnaround Request: Standard: (Yes) No If 'No,' No. of Business Days:

Drinking Water Sample Only: Sample Purpose: Information X Regulatory □ Accreditation (please list below):
System ID #:
DOH Source #:
Multiple Sources #s:
Sample Purpose: A □ B □ Other □

Chemistry Analysis Key

Preservation:		Matrix:		Container:
Unpres	H_2SO_4	WW=Wastewater	SW=Surface Water	P=Plastic
4°C	HCl	GW=Groudwater	DW=Drinking Water	G=Glass
HNO_3	NaOH	S=Soil/Sludge	O=Oil	W=Wipe
Other	Na_2SO_4	E=Extract	X=Other	A=Air (filter or tube)

Client Sample ID	Sample Description	Sample Date	Sample Time Start	Sample Time Stop	Wipe Area / Air Volume	Analysis Requested: EPA 200.8: Pb, Cu	Pres. Upon Receipt (Y/N)	Preservation	Matrix	Container Type	pH	No. Containers
CCE122216-P-CDF-12	Room 102	12-22				X		UNPR.	DW	P		18.3
CCE122216-P-CF-13	Room 104	↓				↓		↓	↓	↓		17.8
CCE122216-P-CDF-14	Room 106											17.6
CCE122216-P-CF-15	Room 106											17.6
CCE122216-P-CF-16	Room 108											17.7
CCE122216-P-CDF-17	Room 110											17.7
CCE122216-P-CF-18	Room 110											17.6
CCE122216-P-WC-19	Corridor 121											17.8
CCE122216-P-CF-20	Room 112											17.6
CCE122216-P-CDF-21	Room 112											17.8
CCE122216-P-CDF-22	Room 114	↓				↓		↓	↓	↓		17.8

Chain of Custody	Relinquished By (Signature):	Date: 12-22-16	Time: 1300
	Relinquished By (Print Name): Kyle Ames	Relinquished To:	
	Company Name: Fulcrum	Method of Shipment:	
Chain of Custody	Relinquished By (Signature):	Date:	Time:
	Relinquished By (Print Name):	Relinquished To:	
	Company Name:	Method of Shipment:	

Chain of Custody	Received By (Signature):	Date: DEC 22 2016	Time: 1300
	Received By (Print Name):	Relinquished To:	
	Company Name: RJLG	Method of Shipment:	
Chain of Custody	Received By (Signature):	Date:	Time:
	Received By (Print Name):	Relinquished To:	
	Company Name:	Method of Shipment:	

Pennsylvania - HQ
350 Hochberg Road
Monroeville, PA 15146

724.325.1776 **Phone**
724.733.1799 **Fax**

Washington
Columbia Basin Analytical Laboratories
2710 North 20th Avenue
Pasco, WA 99301

509.545.4989 **Phone**
509.544.6010 **Fax**

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Request for Environmental and IH Laboratory Analytical Services

W612125, Page 13 of 15

ATTENTION TO:	**RYAN MATHEWS**	Purchase Order No.:	Client Job No.: **162017**

Lab Use Only	Project No.:	Client No:	
	Date Logged In:	Logged In By:	
Report Results To	Name: Amanda Enbysk, Ryan Mathews		
	Company: Fulcrum Environmental Consulting		
	Address: 406 North 2nd Street		
	City, State, Zip: Yakima, WA, 98901		
	Phone: (509) 574-0839	Fax: (509) 575-8453	
	Call with Verbal Results:		
	Email Results To: aenbysk@efulcrum.net, CC: rmathews@efulcrum.net		
	Fax Results To:		
Send Invoice To	Name: Lorrie Boutillier		
	Company: Fulcrum Environmental	Email: lboutillier@efulcrum.net	
	Address: 406 North 2nd Street		
	City, State, Zip: Yakima, WA, 98901		
	Phone: (509) 574-0839	Fax: (509) 575-8453	
Special Instructions			

Turnaround Request: Standard: (Yes) No — If 'No,' No. of Business Days:

Drinking Water Sample Only: Sample Purpose: Information X Regulatory □ Accreditation (please list below): | System ID #: | DOH Source #: | Multiple Sources #s: | Sample Purpose: A □ B □ Other □

Chemistry Analysis Key

Preservation:		Matrix:		Container:
Unpres	H_2SO_4	WW=Wastewater	SW=Surface Water	P=Plastic
4°C	HCl	GW=Groudwater	DW=Drinking Water	G=Glass
HNO_3	NaOH	S=Soil/Sludge	O=Oil	W=Wipe
Other	Na_2SO_4	E=Extract	X=Other	A=Air (filter or tube)

Client Sample ID	Sample Description	Sample Date	Sample Time Start	Sample Time Stop	Wipe Area / Air Volume	Analysis Requested: EPA 200.8: Pb, Cu	Pres. Upon Receipt (Y/N)	Preservation	Matrix	Container Type	pH	No. Containers
CCE122216-P-Cf-23	Room 114	12-22				X		UNPR.	DW	P		17.6
CCE122216-P-Kf-24	Room 177	↓				↓		↓	↓	↓		17.8
CCE122216-P-Cf-25	Room 118											17.8
CCE122216-P-CDf-26	Room 118											17.8
CCE122216-P-CDf-27	Room 120											17.9
CCE122216-P-Cf-28	Room 120											17.1
CCE122216-P-Cf-29	Room 122											17.3
CCE122216-P-CDf-30	Room 158											17.9
CCE122216-P-Cf-31	Room 158											18.0
CCE122216-P-Cf-32	Room 146											18.0
CCE122216-P-CDf-33		↓				↓		↓	↓	↓		18.0

Chain of Custody	Relinquished By (Signature): [signature]	Date: 12-22-16 Time: 1300	
	Relinquished By (Print Name): Kyle Ames	Relinquished To:	
	Company Name: Fulcrum	Method of Shipment:	
Chain of Custody	Relinquished By (Signature):	Date: Time:	
	Relinquished By (Print Name):	Relinquished To:	
	Company Name:	Method of Shipment:	

Chain of Custody	Received By (Signature): [signature]	Date: DEC 22 2016 Time: 1300	
	Received By (Print Name): [signature]	Relinquished To:	
	Company Name: RJ Lee	Method of Shipment:	
Chain of Custody	Received By (Signature):	Date: Time:	
	Received By (Print Name):	Relinquished To:	
	Company Name:	Method of Shipment:	

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RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Request for Environmental and IH Laboratory Analytical Services

W612125, Page 14 of 15

ATTENTION TO:	**RYAN MATHEWS**	Purchase Order No.:	Client Job No.: **162017**

Lab Use Only	Project No.:	Client No:	
	Date Logged In:	Logged In By:	
Report Results To	Name: Amanda Enbysk, Ryan Mathews		
	Company: Fulcrum Environmental Consulting		
	Address: 406 North 2nd Street		
	City, State, Zip: Yakima, WA, 98901		
	Phone: (509) 574-0839	Fax: (509) 575-8453	
	Call with Verbal Results:		
	Email Results To: aenbysk@efulcrum.net, **CC:** rmathews@efulcrum.net		
	Fax Results To:		
Send Invoice To	Name: Lorrie Boutillier		
	Company: Fulcrum Environmental	Email: lboutillier@efulcrum.net	
	Address: 406 North 2nd Street		
	City, State, Zip: Yakima, WA, 98901		
	Phone: (509) 574-0839	Fax: (509) 575-8453	
Special Instructions			

Turnaround Request: Standard: (Yes) No — If 'No,' No. of Business Days:

Drinking Water Sample Only: Sample Purpose: Information X Regulatory □ Accreditation (please list below): System ID #: DOH Source #: Multiple Sources #s: Sample Purpose: A □ B □ Other □

Chemistry Analysis Key

Preservation:		Matrix:		Container:
Unpres	H_2SO_4	WW=Wastewater	SW=Surface Water	P=Plastic
4°C	HCl	GW=Groudwater	DW=Drinking Water	G=Glass
HNO_3	NaOH	S=Soil/Sludge	O=Oil	W=Wipe
Other	Na_2SO_4	E=Extract	X=Other	A=Air (filter or tube)

Client Sample ID	Sample Description	Sample Date	Sample Time Start	Sample Time Stop	Wipe Area / Air Volume	Analysis Requested: EPA 200.8: Pb, Cu	Pres. Upon Receipt (Y/N)	Preservation	Matrix	Container Type	pH	No. Containers
CCE122216-P-Of-34	Room 147	12-22				X		UNPR	OW	P		18.1
CCE122216-P-COf-35	Room 140	↓				↓		↓	↓	↓		17.5
CCE122216-P-Cf-36	Room 140											17.1
CCE122216-P-Cf-37	Room 142											17.1
CCE122216-P-Cf-38	Room 146											18.1
CCE122216-P-Cf-39	Room 148											18.1
CCE122216-P-Cf-40	Room 150											17.6
CCE122216-P-Cf-41	Room 152											18.3
CCE122216-P-Cf-42	Room 154											18.2
CCE122216-P-Of-43	Room 176											18.0
CCE122216-P-COf-44	Room 164	↓				↓		↓	↓	↓		17.5

Chain of Custody	Relinquished By (Signature):	Date: 12-22-16	Time: 1300
	Relinquished By (Print Name): Kyle Ames	Relinquished To:	
	Company Name: Fulcrum	Method of Shipment:	
Chain of Custody	Relinquished By (Signature):	Date:	Time:
	Relinquished By (Print Name):	Relinquished To:	
	Company Name:	Method of Shipment:	

Chain of Custody	Received By (Signature):	Date: DEC 22 2016	Time: 1300
	Received By (Print Name):	Relinquished To:	
	Company Name:	Method of Shipment:	
Chain of Custody	Received By (Signature):	Date:	Time:
	Received By (Print Name):	Relinquished To:	
	Company Name:	Method of Shipment:	

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RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

Request for Environmental and IH Laboratory Analytical Services

W612125, Page 15 of 15

ATTENTION TO:	**RYAN MATHEWS**	Purchase Order No.:	Client Job No.: **162017**

Lab Use Only	Project No.:	Client No:	
	Date Logged In:	Logged In By:	
Report Results To	Name: Amanda Enbysk, Ryan Mathews		
	Company: Fulcrum Environmental Consulting		
	Address: 406 North 2nd Street		
	City, State, Zip: Yakima, WA, 98901		
	Phone: (509) 574-0839	Fax: (509) 575-8453	
	Call with Verbal Results:		
	Email Results To: aenbysk@efulcrum.net, CC: rmathews@efulcrum.net		
	Fax Results To:		
Send Invoice To	Name: Lorrie Boutillier		
	Company: Fulcrum Environmental	Email: lboutillier@efulcrum.net	
	Address: 406 North 2nd Street		
	City, State, Zip: Yakima, WA, 98901		
	Phone: (509) 574-0839	Fax: (509) 575-8453	
Special Instructions			

Turnaround Request: Standard: (Yes) No — If 'No,' No. of Business Days:

Drinking Water Sample Only: Sample Purpose: Information X Regulatory □ — Accreditation (please list below): System ID #: DOH Source #: Multiple Sources #s: Sample Purpose: A □ B □ Other □

Chemistry Analysis Key

Preservation:		Matrix:		Container:
Unpres	H_2SO_4	WW=Wastewater	SW=Surface Water	P=Plastic
4°C	HCl	GW=Groudwater	DW=Drinking Water	G=Glass
HNO_3	NaOH	S=Soil/Sludge	O=Oil	W=Wipe
Other	Na_2SO_4	E=Extract	X=Other	A=Air (filter or tube)

Client Sample ID	Sample Description	Sample Date	Sample Time Start	Sample Time Stop	Wipe Area / Air Volume	Analysis Requested: EPA 200.8: Pb, Cu	Pres. Upon Receipt (Y/N)	Preservation	Matrix	Container Type	pH	No. Containers
CCE122216-P-CDF-45	Room 168	12-22				X		UNPR.	DW	P		17.5
CCE122216-P-WC-46	Corridor 165	↓				↓		↓	↓	↓		17.5
CCE122216-P-WC-47	Gym											17.3
CCE122216-P-WC-48	Portable 1											17.1
CCE122216-P-WC-49	Portable 1	↓				↓		↓	↓	↓		17.3

Chain of Custody	Relinquished By (Signature):	Date: 12-22-16	Time: 1300
	Relinquished By (Print Name): Kyle Ames	Relinquished To:	
	Company Name: Fulcrum	Method of Shipment:	
Chain of Custody	Relinquished By (Signature):	Date:	Time:
	Relinquished By (Print Name):	Relinquished To:	
	Company Name:	Method of Shipment:	

Chain of Custody	Received By (Signature):	Date: DEC 22 2016	Time: 1300
	Received By (Print Name): Kyle Cooper	Relinquished To:	
	Company Name: RJ Lee	Method of Shipment:	
Chain of Custody	Received By (Signature):	Date:	Time:
	Received By (Print Name):	Relinquished To:	
	Company Name:	Method of Shipment:	

Pennsylvania - HQ
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Pasco, WA 99301

509.545.4989 **Phone**
509.544.6010 **Fax**

RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

FULCRUM environmental consulting

ATTACHMENT E

Remedial Analytical Results

P. 509.574.0839 F. 509.575.8453
406 North 2nd Street
Yakima, Washington 98901
efulcrum.net

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

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

RE: Kennewick SD Drinking Water - Cascade Elementary
Work Order Number: 1704067

April 07, 2017

Attention Ryan Mathews:

Fremont Analytical, Inc. received 19 sample(s) on 4/6/2017 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

Date: *04/07/2017*

CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Cascade El
Work Order: 1704067

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1704067-001	CCE4517-P-KF-01	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-002	CCE4517-S-KF-01	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-003	CCE4517-T-KF-01	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-004	CCE4517-P-KF-02	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-005	CCE4517-P-KF-03	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-006	CCE4517-P-OF-08	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-007	CCE4517-S-OF-08	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-008	CCE4517-T-OF-08	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-009	CCE4517-P-CDF-09	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-010	CCE4517-P-CF-25	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-011	CCE4517-P-CF-28	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-012	CCE4517-S-CF-28	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-013	CCE4517-T-CF-28	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-014	CCE4517-P-CDF-44	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-015	CCE4517-S-CDF-44	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-016	CCE4517-T-CDF-44	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-017	CCE4517-P-CDF-45	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-018	CCE4517-P-WC-48	04/05/2017 6:30 AM	04/06/2017 10:31 AM
1704067-019	CCE4517-P-WC-49	04/05/2017 6:30 AM	04/06/2017 10:31 AM

Case Narrative

WO#: **1704067**
Date: **4/7/2017**

CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Cascade Elementary

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:
1704067-001A 214521: Prep Comments for EPA200.8, Sample 1704067-001A: Turbidity: 0.01 NTU
1704067-004A 214527: Prep Comments for EPA200.8, Sample 1704067-004A: Turbidity: 0.01 NTU
1704067-005A 214528: Prep Comments for EPA200.8, Sample 1704067-005A: Turbidity: 0.93 NTU
1704067-006A 214529: Prep Comments for EPA200.8, Sample 1704067-006A: Turbidity: 0.01 NTU
1704067-009A 214530: Prep Comments for EPA200.8, Sample 1704067-009A: Turbidity: 0.06 NTU
1704067-010A 214531: Prep Comments for EPA200.8, Sample 1704067-010A: Turbidity: 0.01 NTU
1704067-011A 214532: Prep Comments for EPA200.8, Sample 1704067-011A: Turbidity: 0.03 NTU
1704067-014A 214533: Prep Comments for EPA200.8, Sample 1704067-014A: Turbidity: 0.01 NTU
1704067-017A 214534: Prep Comments for EPA200.8, Sample 1704067-017A: Turbidity: 0.01 NTU
1704067-018A 214535: Prep Comments for EPA200.8, Sample 1704067-018A: Turbidity: 0.01 NTU
1704067-019A 214536: Prep Comments for EPA200.8, Sample 1704067-019A: Turbidity: 0.01 NTU

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

CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Cascade Elementary

Lab ID: 1704067-001 **Collection Date:** 4/5/2017 6:30:00 AM
Client Sample ID: **CCE4517-P-KF-01** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA Method 200.8				Batch ID: 16722		Analyst: TN
Copper	933	0.500		µg/L	1	4/7/2017 1:08:51 PM

Lab ID: 1704067-004 **Collection Date:** 4/5/2017 6:30:00 AM
Client Sample ID: **CCE4517-P-KF-02** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA Method 200.8				Batch ID: 16722		Analyst: TN
Copper	716	0.500		µg/L	1	4/7/2017 1:41:03 PM

Lab ID: 1704067-005 **Collection Date:** 4/5/2017 6:30:00 AM
Client Sample ID: **CCE4517-P-KF-03** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA Method 200.8				Batch ID: 16722		Analyst: TN
Copper	936	0.500		µg/L	1	4/7/2017 1:45:04 PM

CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Cascade Elementary

Lab ID: 1704067-006 **Collection Date:** 4/5/2017 6:30:00 AM
Client Sample ID: **CCE4517-P-OF-08** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA Method 200.8				Batch ID: 16722		Analyst: TN
Copper	683	0.500		µg/L	1	4/7/2017 1:49:05 PM
Lead	2.62	1.00		µg/L	1	4/7/2017 1:49:05 PM

Lab ID: 1704067-009 **Collection Date:** 4/5/2017 6:30:00 AM
Client Sample ID: **CCE4517-P-CDF-09** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA Method 200.8				Batch ID: 16722		Analyst: TN
Copper	1,030	0.500		µg/L	1	4/7/2017 1:53:07 PM

Lab ID: 1704067-010 **Collection Date:** 4/5/2017 6:30:00 AM
Client Sample ID: **CCE4517-P-CF-25** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA Method 200.8				Batch ID: 16722		Analyst: TN
Copper	567	0.500		µg/L	1	4/7/2017 1:57:08 PM

CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Cascade Elementary

Lab ID: 1704067-011 **Collection Date:** 4/5/2017 6:30:00 AM
Client Sample ID: **CCE4517-P-CF-28** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA Method 200.8				Batch ID: 16722		Analyst: TN
Copper	1,010	0.500		µg/L	1	4/7/2017 2:01:09 PM

Lab ID: 1704067-014 **Collection Date:** 4/5/2017 6:30:00 AM
Client Sample ID: **CCE4517-P-CDF-44** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA Method 200.8				Batch ID: 16722		Analyst: TN
Copper	1,190	0.500		µg/L	1	4/7/2017 2:05:11 PM

Lab ID: 1704067-017 **Collection Date:** 4/5/2017 6:30:00 AM
Client Sample ID: **CCE4517-P-CDF-45** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA Method 200.8				Batch ID: 16722		Analyst: TN
Copper	1,400	0.500		µg/L	1	4/7/2017 2:09:12 PM

CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Cascade Elementary

Lab ID: 1704067-018 **Collection Date:** 4/5/2017 6:30:00 AM
Client Sample ID: **CCE4517-P-WC-48** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA Method 200.8				Batch ID: 16722		Analyst: TN
Copper	0.505	0.500		µg/L	1	4/7/2017 2:13:13 PM
Lead	ND	1.00		µg/L	1	4/7/2017 2:13:13 PM

Lab ID: 1704067-019 **Collection Date:** 4/5/2017 6:30:00 AM
Client Sample ID: **CCE4517-P-WC-49** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA Method 200.8				Batch ID: 16722		Analyst: TN
Copper	1,290	0.500		µg/L	1	4/7/2017 2:25:19 PM
Lead	15.3	1.00		µg/L	1	4/7/2017 2:25:19 PM

Work Order: 1704067
CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Cascade El

QC SUMMARY REPORT

Drinking Water Metals by EPA Method 200.8

Sample ID	**MB-16722**	SampType:	**MBLK**	Units:	**µg/L**	Prep Date:	**4/7/2017**	RunNo:	**35427**
Client ID:	**MBLKW**	Batch ID:	**16722**			Analysis Date:	**4/7/2017**	SeqNo:	**678405**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.500									
Lead	ND	1.00									

Sample ID	**LCS-16722**	SampType:	**LCS**	Units:	**µg/L**	Prep Date:	**4/7/2017**	RunNo:	**35427**
Client ID:	**LCSW**	Batch ID:	**16722**			Analysis Date:	**4/7/2017**	SeqNo:	**678406**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	98.2	0.500	100.0	0	98.2	85	115				
Lead	51.0	1.00	50.00	0	102	85	115				

Sample ID	**1704067-001ADUP**	SampType:	**DUP**	Units:	**µg/L**	Prep Date:	**4/7/2017**	RunNo:	**35427**
Client ID:	**CCE4517-P-KF-01**	Batch ID:	**16722**			Analysis Date:	**4/7/2017**	SeqNo:	**678408**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	963	0.500						932.8	3.19	30	
Lead	3.15	1.00						3.344	5.99	30	

Sample ID	**1704067-001AMS**	SampType:	**MS**	Units:	**µg/L**	Prep Date:	**4/7/2017**	RunNo:	**35427**
Client ID:	**CCE4517-P-KF-01**	Batch ID:	**16722**			Analysis Date:	**4/7/2017**	SeqNo:	**678409**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	1,190	0.500	200.0	932.8	131	70	130				S
Lead	103	1.00	100.0	3.344	99.9	70	130				

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Work Order: 1704067
CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Cascade El

QC SUMMARY REPORT

Drinking Water Metals by EPA Method 200.8

Sample ID **1704067-001AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **4/7/2017** RunNo: **35427**
Client ID: **CCE4517-P-KF-01** Batch ID: **16722** Analysis Date: **4/7/2017** SeqNo: **678410**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	1,140	0.500	200.0	932.8	103	70	130	1,195	4.82	30	
Lead	100	1.00	100.0	3.344	97.1	70	130	103.2	2.73	30	

Sample Log-In Check List

Client Name:	**FE**	Work Order Number:	**1704067**
Logged by:	**Clare Griggs**	Date Received:	**4/6/2017 10:31:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C*	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☑	No ☐	NA ☐ HNO3
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler 1	2.2
Cooler 2	0.9
Sample 1	2.9
Sample 2	1.1

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

Chain of Custody Record and Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N. Tel: 206-352-3790
Seattle, WA 98103 Fax: 206-352-7178

Date: 4/6/2017 Laboratory Project No (internal): 1704067
Page: 1 of: 2

Client: Fulcrum Environmental Consulting
Address: 406 North Second Street
City, State, Zip: Yakima, WA, 98901
Telephone: 509.574.0839 Fax: 509.575.8453

Project Name: Kennewick SO Drinking Water - Cascade Elementary
Project No: 162017.26 Collected by: Amanda Enbysk
Location: Cascade Elementary, Kennewick, WA
Report To (PM): Ryan Mathews
PM Email: rmathews@efulcrum.net; cc: aenbysk@efulcrum.net

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	HNO3 preserved	Comments
1	CCE4517-P-KF-01	4/5/17	0630	pw										⊗				⊗	Cu only
2	CCE4517-S-KF-01	↓	↓	↓															HOLD; unpreserved
3	CCE4517-T-KF-01																		↓
4	CCE4517-P-KF-02													⊗				⊗	Cu only
5	CCE4517-P-KF-03													⊗				⊗	Cu only
6	CCE4517-P-OF-08													⊗				⊗	Pb + Cu
7	CCE4517-S-OF-08																		HOLD; unpr.
8	CCE4517-T-OF-08																		↓
9	CCE4517-P-COF-09													⊗				⊗	Cu only
10	CCE4517-P-CF-25	↓	↓	↓										⊗				⊗	Cu only

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr (Cu) Fe Hg K Mg Mn Mo Na Ni (Pb) Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☐ 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.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks: Please preserve all unpr.

TAT: ASAP

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 agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x [signature]	4/5/2017; 1500	x [signature]	4/6/2017 1031
x		x	

TAT → SameDay^ NextDay^ 2 Day 3 Day STD

^Please coordinate with the lab in advance

Distribution: White - Lab, Yellow - File, Pink - Originator

www.fremontanalytical.com

Chain of Custody Record and Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 4/6/17

Laboratory Project No (internal):

Page: 2 of: 2

Client: Fulcrum Environmental Consulting
Address: 406 North Second Street
City, State, Zip: Yakima, WA, 98901
Telephone: 509.574.0839 Fax: 509.575.8453

Project Name: Kennewick SD Drinking Water - Cascade Elementary
Project No: 162017.26 Collected by: Amanda Enbysk
Location: Cascade Elementary, Kennewick, WA
Report To (PM): Ryan Mathews
PM Email: rmathews@efulcrum.net; cc: aenbysk@efulcrum.net

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	HNO3 preserved	Comments
1	CCE4517-P-CF-28	4/5/17	0630	DW									⊗					⊗	Cu only
2	CCE4517-S-CF-28	↓	↓	↓															HOLD; unpreserved
3	CCE4517-T-CF-28	↓																	↓
4	CCE4517-P-COF-44												⊗					⊗	Cu only
5	CCE4517-S-COF-44																		
6	CCE4517-T-COF-44																		
7	CCE4517-P-COF-45												⊗					⊗	Cu only
8	CCE4517-P-WC-48												⊗					⊗	Pb & Cu
9	CCE4517-P-WC-49	↓	↓	↓									⊗					⊗	Pb & Cu
10																			

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr (Cu) Fe Hg K Mg Mn Mo Na Ni (Pb) Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☐ 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.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks: see page 1

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 agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x [signature]	4/5/2017; 1500	x [signature]	4/6/2017 1031
Relinquished	Date/Time	Received	Date/Time
x		x	

TAT → SameDay^ NextDay^ 2 Day 3 Day STD

^Please coordinate with the lab in advance

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

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

RE: KSD Drinking Water - Cascade Elementary
Work Order Number: 1705256

May 22, 2017

Attention Ryan Mathews:

Fremont Analytical, Inc. received 4 sample(s) on 5/22/2017 for the analyses presented in the following report.

Drinking Water Metals by EPA Method 200.8
Total 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

Date: *05/22/2017*

CLIENT: Fulcrum Environmental
Project: KSD Drinking Water - Cascade Elementary
Work Order: 1705256

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1705256-001	CCE52017-P-CDF-45	05/20/2017 7:30 AM	05/22/2017 9:56 AM
1705256-002	CCE52017-S-CDF-45	05/20/2017 7:30 AM	05/22/2017 9:56 AM
1705256-003	CCE52017-T-CDF-45	05/20/2017 7:30 AM	05/22/2017 9:56 AM
1705256-004	CCE52017-P-WC-49	05/20/2017 7:30 AM	05/22/2017 9:56 AM

Case Narrative

WO#: **1705256**
Date: **5/22/2017**

CLIENT: Fulcrum Environmental
Project: KSD Drinking Water - Cascade Elementary

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:
1705256-001A 220410: Prep Comments for EPA200.8, Sample 1705256-001A: Turbidity: 1.17 NTU -> fails, needs digestion.
1705256-004A 220411: Prep Comments for EPA200.8, Sample 1705256-004A: Turbidity: 0.01 NTU

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: **1705256**
Date Reported: **5/22/2017**

CLIENT: Fulcrum Environmental
Project: KSD Drinking Water - Cascade Elementary

Lab ID: 1705256-001 **Collection Date:** 5/20/2017 7:30:00 AM
Client Sample ID: **CCE52017-P-CDF-45** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 200.8				Batch ID: 17123		Analyst: TN
Copper	79.7	0.500		µg/L	1	5/22/2017 1:54:51 PM

Lab ID: 1705256-004 **Collection Date:** 5/20/2017 7:30:00 AM
Client Sample ID: **CCE52017-P-WC-49** **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Drinking Water Metals by EPA Method 200.8				Batch ID: 17121		Analyst: TN
Copper	1,400	0.500		µg/L	1	5/22/2017 11:52:43 AM

Work Order: 1705256
CLIENT: Fulcrum Environmental
Project: KSD Drinking Water - Cascade Elementary

QC SUMMARY REPORT

Drinking Water Metals by EPA Method 200.8

Sample ID	**MB-17121**	SampType:	**MBLK**			Units:	**µg/L**		Prep Date:	**5/22/2017**		RunNo:	**36308**	
Client ID:	**MBLKW**	Batch ID:	**17121**						Analysis Date:	**5/22/2017**		SeqNo:	**695842**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Copper		ND	0.500											

Sample ID	**LCS-17121**	SampType:	**LCS**			Units:	**µg/L**		Prep Date:	**5/22/2017**		RunNo:	**36308**	
Client ID:	**LCSW**	Batch ID:	**17121**						Analysis Date:	**5/22/2017**		SeqNo:	**695843**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Copper		101	0.500	100.0	0	101	85	115						

Sample ID	**1705251-001ADUP**	SampType:	**DUP**			Units:	**µg/L**		Prep Date:	**5/22/2017**		RunNo:	**36308**	
Client ID:	**BATCH**	Batch ID:	**17121**						Analysis Date:	**5/22/2017**		SeqNo:	**695845**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Copper		134	0.500						137.0	2.29	30			

Sample ID	**1705251-001AMS**	SampType:	**MS**			Units:	**µg/L**		Prep Date:	**5/22/2017**		RunNo:	**36308**	
Client ID:	**BATCH**	Batch ID:	**17121**						Analysis Date:	**5/22/2017**		SeqNo:	**695846**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Copper		343	0.500	200.0	137.0	103	70	130						

Sample ID	**1705251-001AMSD**	SampType:	**MSD**			Units:	**µg/L**		Prep Date:	**5/22/2017**		RunNo:	**36308**	
Client ID:	**BATCH**	Batch ID:	**17121**						Analysis Date:	**5/22/2017**		SeqNo:	**695847**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Copper		328	0.500	200.0	137.0	95.7	70	130	342.5	4.19	30			

Work Order: 1705256
CLIENT: Fulcrum Environmental
Project: KSD Drinking Water - Cascade Elementary

QC SUMMARY REPORT

Total Metals by EPA Method 200.8

Sample ID	**MB-17123**	SampType:	**MBLK**			Units:	**µg/L**	Prep Date:	**5/22/2017**	RunNo:	**36313**	
Client ID:	**MBLKW**	Batch ID:	**17123**					Analysis Date:	**5/22/2017**	SeqNo:	**695959**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper		ND	0.500									

Sample ID	**LCS-17123**	SampType:	**LCS**			Units:	**µg/L**	Prep Date:	**5/22/2017**	RunNo:	**36313**	
Client ID:	**LCSW**	Batch ID:	**17123**					Analysis Date:	**5/22/2017**	SeqNo:	**695960**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper		98.0	0.500	100.0	0	98.0	85	115				

Sample ID	**1705225-009BDUP**	SampType:	**DUP**			Units:	**µg/L**	Prep Date:	**5/22/2017**	RunNo:	**36313**	
Client ID:	**BATCH**	Batch ID:	**17123**					Analysis Date:	**5/22/2017**	SeqNo:	**695964**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper		0.813	0.500						0.4830	50.9	30	

Sample ID	**1705225-009BMS**	SampType:	**MS**			Units:	**µg/L**	Prep Date:	**5/22/2017**	RunNo:	**36313**	
Client ID:	**BATCH**	Batch ID:	**17123**					Analysis Date:	**5/22/2017**	SeqNo:	**695967**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper		497	0.500	500.0	0.4830	99.3	70	130				

Sample ID	**1705225-009BMSD**	SampType:	**MSD**			Units:	**µg/L**	Prep Date:	**5/22/2017**	RunNo:	**36313**	
Client ID:	**BATCH**	Batch ID:	**17123**					Analysis Date:	**5/22/2017**	SeqNo:	**695968**	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper		498	0.500	500.0	0.4830	99.5	70	130	497.2	0.137	30	

Sample Log-In Check List

Client Name:	**FE**	Work Order Number:	**1705256**
Logged by:	**Erica Silva**	Date Received:	**5/22/2017 9:56:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	FedEx		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☑	Not Required ☐
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C*	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☑	No ☐	NA ☐ HNO3 to 002A - 003A
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	6.4
Sample	6.0

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

Chain of Custody Record and Laboratory Services Agreement

Fremont Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 5/20/2017 | Laboratory Project No (internal): 1705256 | Page: 1 of 1

Client: Fulcrum Environmental Consulting
Address: 406 North Second Street
City, State, Zip: Yakima, WA, 98901
Telephone: 509.574.0839 Fax: 509.575.8453

Project Name: KSD Drinkg Water - Cascade Elementary
Project No: 162017.26 Collected by: Amanda Enbysk
Location: Cascade Elementary, Kennewick, WA
Report To (PM): Ryan Mathews
PM Email: rmathews@efulcrum.net; cc: aenbysk@efulcrum.net

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	HNO3 preserved	Comments
1	CCE52017-P-COF-45	5/20/2017	0930	DW									X					X	
2	CCE52017-S-COF-45	↓	↓	↓															HOLD; unpreserved ↓
3	CCE52017-T-COF-45																		
4	CCE52017-P-WC-49												X					X	
5																			
6																			
7																			
8																			
9																			
10																			

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☐ 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.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks:
Please preserve all unpreserved
TAT: ASAP

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 agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x	5/20/2017; 1200	x	5/22/2017 0956
x		x	

TAT → SameDay^ NextDay^ 2 Day 3 Day STD
^Please coordinate with the lab in advance

FULCRUM environmental consulting

ATTACHMENT F

Fixture Style Photographs

P. 509.574.0839 F. 509.575.8453
406 North 2nd Street
Yakima, Washington 98901
efulcrum.net

Sample CCE122216-P-OF-08: **49 µg/L** initial lead concentration. Fixture style above is identified producing elevated lead concentrations.

Sample CCE122216-P-CF-23: <1.0 µg/L initial lead concentration. Same fixture style as initial sample with elevated lead concentration.

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