

October 31, 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  
Lincoln Elementary School, 4901 West 20<sup>th</sup> Avenue, Kennewick, Washington**

Dear Keith:

On Wednesday, December 21, 2016, Fulcrum Environmental Consulting, Inc. (Fulcrum) collected 52 drinking water samples for lead and copper analysis from Lincoln Elementary School (School) located at 4601 West 20<sup>th</sup> Avenue in Kennewick, Washington. Initial sampling identified 23 fixture locations with copper concentrations above guidance levels. Fulcrum returned to the School on January 21, March 4, and March 18, 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<sup>1</sup>. 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 21, 2016. Initial results identified 23 samples with copper concentrations above the Environmental Protection Agency (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.

Copper is not a significant component in fixtures, but is the primary material in the plumbing system. To remediate elevated copper levels, the District aggressively flushed the identified fixtures with cold water to clear the plumbing of copper construction debris. Fulcrum returned on January 21, March 4, and March 18, 2017 and collected samples to evaluate the success of the remediation. Most follow-up samples yielded results below the EPA action level, confirming the remediation was successful. One fixture, located in the

<sup>1</sup> 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

Staff Work Room, did not respond to remediation and remained above the action level. Fulcrum recommended and the District elected to permanently remove the fixture from service. Following sampling and review of laboratory results, Fulcrum recommended, and District elected to, return all fixtures reporting below action levels to service.

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 and Figure 2 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 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.

### Remedial Sampling

Remedial sampling typically consisted of first, second, and third draw samples from the fixture location 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 the remedial sampling event are presented in Figure 2 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 23 samples with copper concentrations above the EPA action level of 1,300 micrograms per liter ( $\mu\text{g/L}$ ). No samples were identified with lead concentrations above the EPA action level of 15  $\mu\text{g/L}$ .

### 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 copper concentrations, the District



completed an aggressive flush of the fixtures. Fulcrum returned on the morning following the aggressive flush, January 21, March 4, and March 18, 2017, to collect follow-up samples.

Analytical results from remedial sampling indicated the aggressive flush was successful at reducing copper concentrations below the action level for all but one of the fixtures. Fulcrum recommended the District elected to permanently remove the remaining fixture, identified as the drinking fountain in Staff Work Room 176, from service.

## Recommendations

No samples were found to contain lead concentrations above the EPA action level of 15 µg/L. A total of 23 initial samples contained copper above the EPA action level of 1,300 µg/L. The District completed an aggressive flush to reduce the copper concentration of the fixtures and follow-up sampling yielded results below the EPA action level for all but one fixture. Fulcrum recommended, and the District elected, to permanently remove the remaining fixture from service. Following sampling and review of laboratory results, Fulcrum recommended and the District elected to return all fixtures reporting below action levels to service.

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 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



## **ATTACHMENT A**

Figure 1: Initial Sample Location Map  
Figure 2: Remedial Sample Location Map

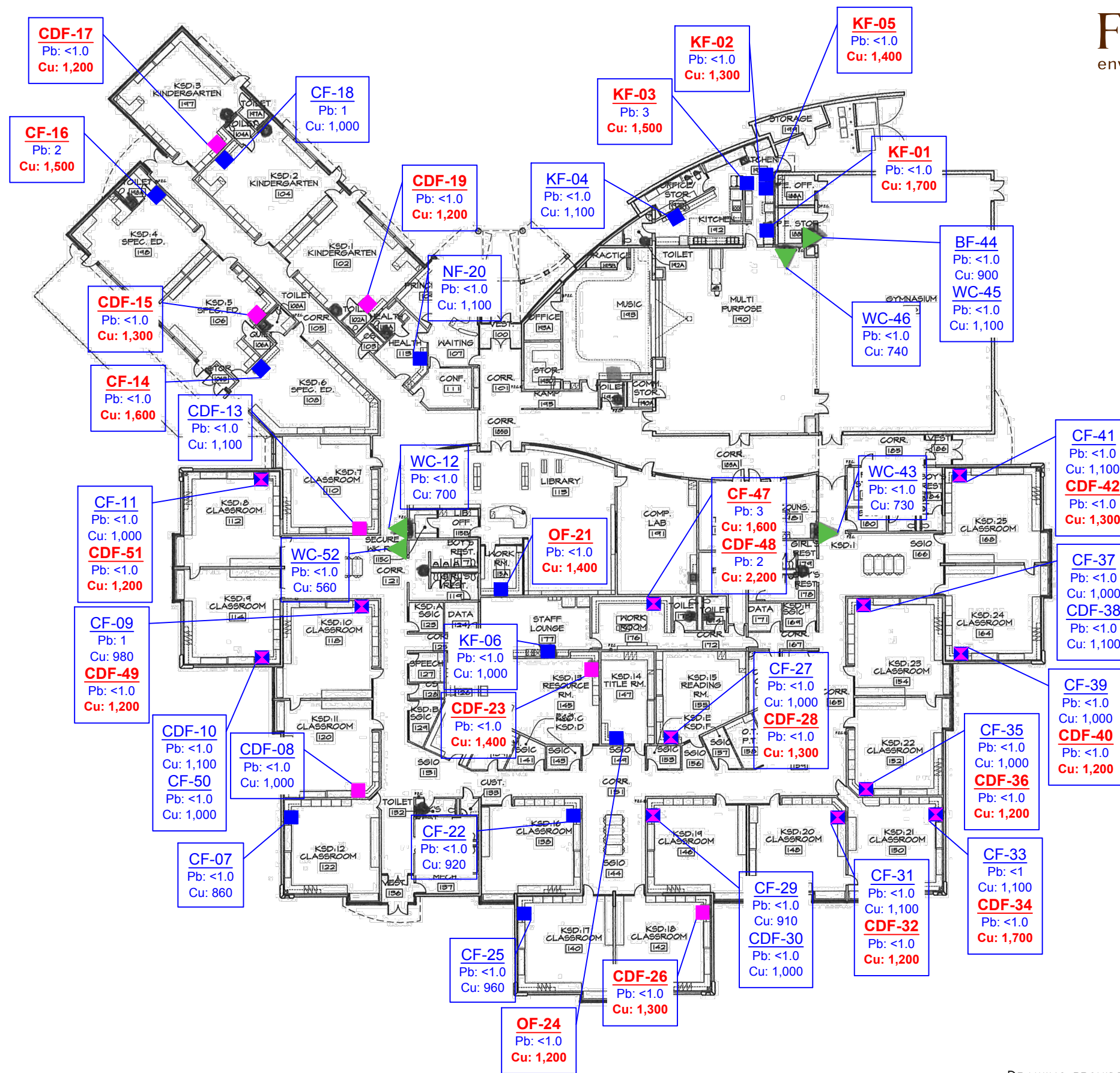
### LEGEND

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.



DRAWING PROVIDED BY KENNEWICK SCHOOL DISTRICT



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

■

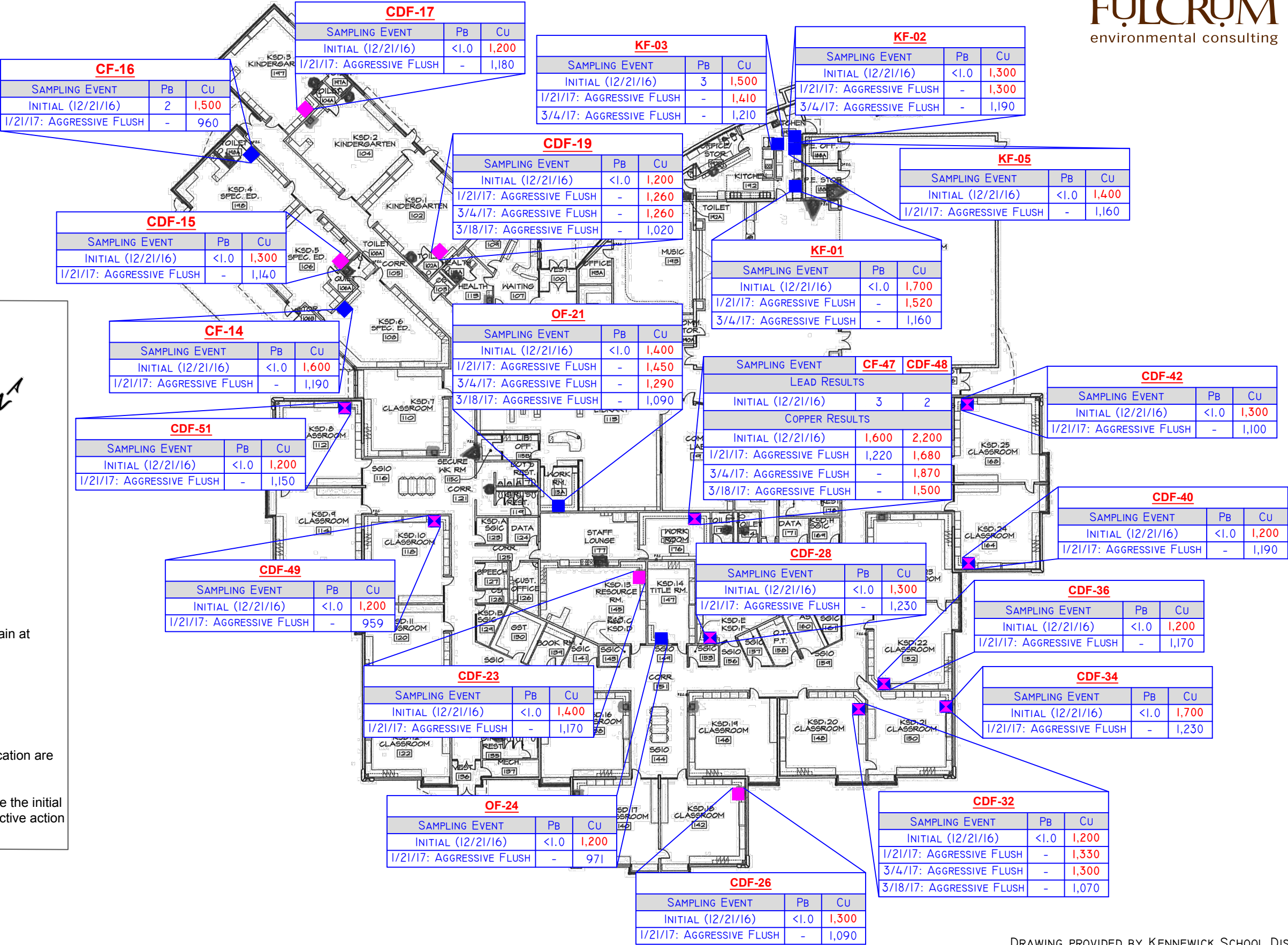
- Sample location: faucet and drinking fountain at same sink

▼

- 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.



DRAWING PROVIDED BY KENNEWICK SCHOOL DISTRICT

## **ATTACHMENT B**

### Site-Specific Sampling and Analysis Plan





## 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: Lincoln Elementary Address: 4901 West 20<sup>th</sup> Avenue, Kennewick, WA

☒ Elementary      ☐ Middle School      ☐ High School      ☐ Administration

Date of Construction: 2014 Modernizations: N/A

Fixture Type	Locations	Fixture Styles <sup>1</sup>	Samples	Ratio
Drinking fountain/water cooler (DF/WC)	8	3	6	63%
Kitchen Fixture (KF)	5	4	5	100%
Classroom faucet, including faucets in Food Labs and Life Sciences Classrooms (CF)	27	1	17	63%
Classroom drinking fountain at sink (CDF)	30	1	19	63%
Nurse's Office/Health Room (NF)	1	1	1	100%
Teacher's Lounges/Work Rooms (OF)	4	2	4	100%
<b>TOTALS</b>	<b>75</b>		<b>52</b>	<b>69%</b>

<sup>1</sup> Fixture styles are approximate based on sampler's observations

Lead Sampler: Kyle Ames Date: 12/21/2016

Sample Prefix: LE – 122116 – P (first-draw) – 01-54  
*School Code*    *Date*    *Sample Type*    *Fixture Type*    *Sample Number*

Laboratory: R. J. Lee Group, Columbia Basin Analytical Delivery Date: December 21, 2016

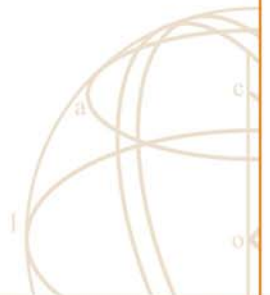
Comments:

## **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



**Table 1: Initial Sampling Analytical Results Summary**

Sample Identification and Location	Fixture Type	Lead Results (µg/L)	Copper Results (µg/L)
<b>LE122116-P-KF-01: Kitchen, E. wall, S. Fixture</b>	<b>Kitchen Faucet</b>	1	<b>1,700</b>
<b>LE122116-P-KF-02: Kitchen, E. wall, N. Fixture</b>	<b>Kitchen Faucet</b>	<1.0	<b>1,300</b>
<b>LE122116-P-KF-03: Kitchen, Middle island</b>	<b>Kitchen Faucet</b>	3	<b>1,500</b>
LE122116-P-KF-04: Kitchen, N.W. wall	Kitchen Faucet	<1.0	1,100
<b>LE122116-P-KF-05: Kitchen, E. wall, Middle Fixture</b>	<b>Kitchen Faucet</b>	<1.0	<b>1,400</b>
LE122116-P-KF-06: Staff lounge, Room 177	Kitchen Faucet	<1.0	1,000
LE122116-P-CF-07: Room 122	Classroom Faucet	<1.0	860
LE122116-P-CDF-08: Classroom 11	Classroom Drinking Fountain	<1.0	1,000
LE122116-P-CF-09: Classroom 10	Classroom Faucet	1	980
LE122116-P-CDF-10: Classroom 9	Classroom Drinking Fountain	<1.0	1,100
LE122116-P-CF-11: Classroom 8	Classroom Faucet	<1.0	1,000
LE122116-P-WC-12: Hallway opposite Classroom 7, left fixture	Water Cooler Fountain	<1.0	700
LE122116-P-CDF-13: Classroom 7	Classroom Drinking Fountain	<1.0	1,100
<b>LE122116-P-CF-14: Classroom 6</b>	<b>Classroom Faucet</b>	<1.0	<b>1,600</b>
<b>LE122116-P-CDF-15: Classroom 5</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,300</b>
<b>LE122116-P-CF-16: Classroom 4</b>	<b>Classroom Faucet</b>	2	<b>1,500</b>
<b>LE122116-P-CDF-17: Classroom 3</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,200</b>
LE122116-P-CF-18: Classroom 2	Classroom Faucet	1	1,000
<b>LE122116-P-CDF-19: Classroom 1</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,200</b>
LE122116-P-NF-20: Health Room	Nurse's Faucet	<1.0	1,100
<b>LE122116-P-OF-21: Library Work Room</b>	<b>Office Faucet</b>	<1.0	<b>1,400</b>
LE122116-P-CF-22: Classroom 16	Classroom Faucet	<1.0	920
<b>LE122116-P-CDF-23: Classroom 13</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,400</b>
<b>LE122116-P-OF-24: Classroom 14</b>	<b>Office Faucet</b>	<1.0	<b>1,200</b>
LE122116-P-CF-25: Classroom 17	Classroom Faucet	<1.0	960
<b>LE122116-P-CDF-26: Classroom 18</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,300</b>
LE122116-P-CF-27: Classroom 15	Classroom Faucet	<1.0	1,000
<b>LE122116-P-CDF-28: Classroom 15</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,300</b>
LE122116-P-CF-29: Classroom 19	Classroom Faucet	<1.0	910
LE122116-P-CDF-30: Classroom 19	Classroom Drinking Fountain	<1.0	1,000
LE122116-P-CF-31: Classroom 20	Classroom Faucet	<1.0	1,100
<b>LE122116-P-CDF-32: Classroom 20</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,200</b>
LE122116-P-CF-33: Classroom 21	Classroom Faucet	<1.0	1,100
<b>LE122116-P-CDF-34: Classroom 21</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,700</b>
LE122116-P-CF-35: Classroom 22	Classroom Faucet	<1.0	1,000
<b>LE122116-P-CDF-36: Classroom 22</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,200</b>
LE122116-P-CF-37: Classroom 23	Classroom Faucet	<1.0	1,000
LE122116-P-CDF-38: Classroom 23	Classroom Drinking Fountain	<1.0	1,100
LE122116-P-CF-39: Classroom 24	Classroom Faucet	<1.0	1,000
<b>LE122116-P-CDF-40: Classroom 24</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,200</b>
LE122116-P-CF-41: Classroom 25	Classroom Faucet	<1.0	1,100

Sample Identification and Location	Fixture Type	Lead Results (µg/L)	Copper Results (µg/L)
<b>LE122116-P-CDF-42: Classroom 25</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,300</b>
LE122116-P-WC-43: Hallway opposite Classroom 25, left fixture	Water Cooler Fountain	<1.0	730
LE122116-P-BF-44: Gymnasium, left fixture	Bottle Filler	<1.0	900
LE122116-P-WC-45: Gymnasium, left fixture	Water Cooler Fountain	<1.0	1,100
LE122116-P-WC-46: Multi Purpose/Cafeteria, left fixture	Water Cooler Fountain	<1.0	740
<b>LE122116-P-OF-47: Staff Work Room 176</b>	<b>Office Faucet</b>	3	<b>1,600</b>
<b>LE122116-P-CDF-48: Staff Work Room 176</b>	<b>Classroom Drinking Fountain</b>	2	<b>2,200</b>
<b>LE122116-P-CDF-49: Classroom 10</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,200</b>
LE122116-P-CF-50: Classroom 9	Classroom Faucet	<1.0	1,000
<b>LE122116-P-CDF-51: Classroom 8</b>	<b>Classroom Drinking Fountain</b>	<1.0	<b>1,200</b>
LE122116-P-WC-52: Hallway opposite Classroom 7, right fixture	Water Cooler Fountain	<1.0	560
<i>LE122116-P-WC-53: Laboratory Blank</i>	<i>Distilled Water Blank</i>	<1.0	<10
<i>LE122116-P-WC-54: Laboratory Spike</i>	<i>Lead and Copper Spike</i>	14.0	1,200
<b>EPA Action Level</b>		<b>15</b>	<b>1,300</b>

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 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

**Table 2: pH and Temperature Data Summary**

Sample Number	Fixture Type	pH Flush	pH Sample	Temperature (°C) Flush	Temperature (°C) Sample
LE122116-P-CDF-08: Classroom 11	Classroom Drinking Fountain	8.06	8.11	16.6	18.6
LE122116-P-WC-12: Hallway opposite Classroom 7, left fixture	Water Cooler Fountain	7.84	7.87	16.3	17.0
LE122116-P-CF-16: Classroom 4	Classroom Faucet	7.90	7.91	15.6	18.6
LE122116-P-NF-20: Health Room	Nurse's Faucet	8.07	8.03	15.6	17.4
LE122116-P-OF-24: Classroom 14	Office Faucet	8.04	8.03	14.9	19.4
LE122116-P-CDF-28: Classroom 15	Classroom Drinking Fountain	8.01	8.01	15.5	19.0
LE122116-P-CDF-32: Classroom 20	Classroom Drinking Fountain	7.92	7.89	14.7	20.3
LE122116-P-CDF-36: Classroom 22	Classroom Drinking Fountain	7.91	8.07	14.9	18.9
LE122116-P-CDF-40: Classroom 24	Classroom Drinking Fountain	7.64	7.95	15.0	18.1
LE122116-P-BF-44: Gymnasium, left fixture	Bathroom Faucet	7.73	7.83	16.6	15.9
LE122116-P-CDF-48: Staff Work Room 176	Classroom Drinking Fountain	7.81	7.98	15.8	19.9



Table 3: Remedial Sampling Analytical Results Summary

Sampling Event	Sample Identification																								
	KF-01	KF-02	KF-03	KF-05	CF-14	CDF-15	CF-16	CDF-17	CDF-19	OF-21	CDF-23	OF-24	CDF-26	CDF-28	CDF-32	CDF-34	CDF-36	CDF-40	CDF-42	OF-47	CDF-48	CDF-49	CDF-51	WC-53	WC-54
Initial (12/21/2016)	1,700	1,300	1,500	1,400	1,600	1,300	1,500	1,200	1,200	1,400	1,400	1,200	1,300	1,300	1,200	1,700	1,200	1,200	1,300	1,600	2,200	1,200	1,200	<10	1,200
1/21/2017: Aggressive Flush	1,520	1,300	1,410	1,160	1,190	1,140	960	1,180	1,260	1,450	1,170	971	1,090	1,230	1,330	1,230	1,170	1,190	1,100	1,220	1,680	959	1,150	<0.5	-
3/4/2017: Aggressive Flush	1,160	1,190	1,210	-	-	-	-	-	1,260	1,290	-	-	-	-	1,300	-	-	-	-	-	1,870	-	-	<0.5	1,230
3/18/2017: Aggressive Flush	-	-	-	-	-	-	-	-	1,020	1,090	-	-	-	-	1,070	-	-	-	-	-	1,500	-	-	<0.5	1,370
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	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300

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

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

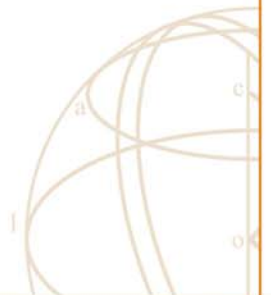
Results indicated in **bold** indicate concentrations above the action levels of 15 µg/L for lead and 1,300 µg/L for copper

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



## **ATTACHMENT D**

Initial Analytical Results





RJ LeeGroup, 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 54 sample(s) on 12/21/16 for analysis. These sample(s) have been assigned a login order number of W612104. 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.

*-Samples were analyzed on January 11, 2017 and samples requiring dilutions were analyzed on January 12, 2017.*

*All samples were diluted 1:10.*

*X - Samples that exceeded the instrument calibration range were rerun at a 1:100 dilution, necessitating a 10-fold increase in the PQL.*

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:

A handwritten signature in black ink, appearing to read "Fernanda Pincheira".

01/13/17

Project Coordinator II, M. Fernanda Pincheira

Date

If you have any questions please feel free to contact Fernanda Pincheira at [MPincheira@rjleegroup.com](mailto:MPincheira@rjleegroup.com).

Columbia Basin Analytical Laboratories | 2710 North 20th Avenue, Pasco WA 99301 | 509.545.4989

WWW.RJLEEGROUP.COM

Report Template: GenMetalReportFull\_v12.rpt

Approved: 01/13/17 10:01  
Report Time Stamp: 01/13/17 12:28



## Laboratory Report

Ryan Mathews

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

Client Project:

Fulcrum Kennewick

RJ Lee Group No.: W612104

COC No.: Kennewick

Samples Received: 12/21/16

Analysis/Prep Date: 01/11/17

Report Date: 01/13/17

**Sample Name:** LE122116-P-KF-01

**RJ Lee Grp. ID:** W612104-01

**Matrix:** Potable Water

**Date Received:** 12/21/16

**Date Analyzed:** 01/11/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.7	0.1	X
Lead	EPA 200.8	0.001	0.001	

**Sample Name:** LE122116-P-KF-02

**RJ Lee Grp. ID:** W612104-02

**Matrix:** Potable Water

**Date Received:** 12/21/16

**Date Analyzed:** 01/11/17

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:** LE122116-P-KF-03

**RJ Lee Grp. ID:** W612104-03

**Matrix:** Potable Water

**Date Received:** 12/21/16

**Date Analyzed:** 01/11/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.5	0.1	X
Lead	EPA 200.8	0.003	0.001	

**Sample Name:** LE122116-P-KF-04

**RJ Lee Grp. ID:** W612104-04

**Matrix:** Potable Water

**Date Received:** 12/21/16

**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-KF-05

**RJ Lee Grp. ID:** W612104-05

**Matrix:** Potable Water

**Date Received:** 12/21/16

**Date Analyzed:** 01/11/17

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

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Report Template: GenMetalReportFull\_v12.rpt

Approved: 01/13/17 10:01  
Report Time Stamp: 01/13/17 12:28

**Sample Name:** LE122116-P-KF-06**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-06**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CF-07**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-07**Date Analyzed:** 01/11/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.86	0.01	
Lead	EPA 200.8	< 0.001	0.001	

**Sample Name:** LE122116-P-CDF-08**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-08**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CF-09**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-09**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CDF-10**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-10**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CF-11**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-11**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-WC-12**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-12**Date Analyzed:** 01/11/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.70	0.01	
Lead	EPA 200.8	< 0.001	0.001	

**Sample Name:** LE122116-P-CDF-13**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-13**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CF-14**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-14**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CDF-15**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-15**Date Analyzed:** 01/11/17

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:** LE122116-P-CF-16**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-16**Date Analyzed:** 01/11/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.5	0.1	X
Lead	EPA 200.8	0.002	0.001	

**Sample Name:** LE122116-P-CDF-17**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-17**Date Analyzed:** 01/11/17

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:** LE122116-P-CF-18**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-18**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CDF-19**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-19**Date Analyzed:** 01/11/17

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:** LE122116-P-NF-20**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-20**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-OF-21**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-21**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CF-22**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-22**Date Analyzed:** 01/11/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.92	0.01	
Lead	EPA 200.8	< 0.001	0.001	

**Sample Name:** LE122116-P-CDF-23**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-23**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-OF-24**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-24**Date Analyzed:** 01/11/17

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:** LE122116-P-CF-25**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-25**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CDF-26**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-26**Date Analyzed:** 01/11/17

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:** LE122116-P-CF-27**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-27**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CDF-28**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-28**Date Analyzed:** 01/11/17

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:** LE122116-P-CF-29**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-29**Date Analyzed:** 01/11/17

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:** LE122116-P-CDF-30**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-30**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CF-31**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-31**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CDF-32**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-32**Date Analyzed:** 01/11/17

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:** LE122116-P-CF-33**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-33**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CDF-34**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-34**Date Analyzed:** 01/11/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.7	0.1	X
Lead	EPA 200.8	< 0.001	0.001	

**Sample Name:** LE122116-P-CF-35**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-35**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CDF-36**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-36**Date Analyzed:** 01/11/17

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:** LE122116-P-CF-37**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-37**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CDF-38**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-38**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CF-39**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-39**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-CDF-40**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-40**Date Analyzed:** 01/11/17

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:** LE122116-P-CF-41**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-41**Date Analyzed:** 01/12/17

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

**Sample Name:** LE122116-P-CDF-42**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-42**Date Analyzed:** 01/12/17

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:** LE122116-P-WC-43**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-43**Date Analyzed:** 01/11/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.73	0.01	
Lead	EPA 200.8	< 0.001	0.001	

**Sample Name:** LE122116-P-BF-44**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-44**Date Analyzed:** 01/12/17

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:** LE122116-P-WC-45**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-45**Date Analyzed:** 01/12/17

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

**Sample Name:** LE122116-P-WC-46**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-46**Date Analyzed:** 01/11/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.74	0.01	
Lead	EPA 200.8	< 0.001	0.001	

**Sample Name:** LE122116-P-OF-47**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-47**Date Analyzed:** 01/12/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.6	0.1	X
Lead	EPA 200.8	0.003	0.001	



**Sample Name:** LE122116-P-CDF-48**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-48**Date Analyzed:** 01/12/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.2	0.1	X
Lead	EPA 200.8	0.002	0.001	

**Sample Name:** LE122116-P-CDF-49**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-49**Date Analyzed:** 01/12/17

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:** LE122116-P-CF-50**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-50**Date Analyzed:** 01/12/17

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

**Sample Name:** LE122116-P-CDF-51**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-51**Date Analyzed:** 01/12/17

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:** LE122116-P-WC-52**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-52**Date Analyzed:** 01/11/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.56	0.01	
Lead	EPA 200.8	< 0.001	0.001	

**Sample Name:** LE122116-P-WC-53**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-53**Date Analyzed:** 01/11/17

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

**Sample Name:** LE122116-P-WC-54**Matrix:** Potable Water**Date Received:** 12/21/16**RJ Lee Grp. ID:** W612104-54**Date Analyzed:** 01/12/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.2	0.1	X
Lead	EPA 200.8	0.014	0.001	

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

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W612104

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R4-12032015



**RJ LEE GROUP**  
DELIVERING SCIENTIFIC RESOLUTION

# Request for Environmental and IH Laboratory Analytical Services

W612104

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ATTENTION TO: RYAN MATHEWS				Purchase Order No.: 162017		Client Job No.: 162017	
<b>Lab Use Only</b>		Project No.: Date Logged In: Logged In By:		<b>Turnaround Request</b>		Standard: <b>Yes</b> No If 'No,' No. of Business Days:	
<b>Report Results To</b>		Name: Amanda Embysk, 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: aembysk@fulcrum.net, CC: rmathews@fulcrum.net Fax Results To:		<b>Drinking Water Sample Only</b>		Sample Purpose: <b>Information X</b> Regulatory <input type="checkbox"/> Accreditation (please list below): System ID #: DOH Source #: Multiple Sources #s:	
<b>Send Invoice To</b>		Name: Lorrie Boutillier Company: Fulcrum Environmental Address: 406 North 2nd Street City, State, Zip: Yakima, WA, 98901 Phone: (509) 574-0839 Fax: (509) 575-8453		<b>Chemistry Analysis Key</b>		Preservation: <input type="checkbox"/> Matrix: <input type="checkbox"/> Container: <input type="checkbox"/> Unpres H <sub>2</sub> SO <sub>4</sub> WW=Wastewater P=Plastic 4°C HCl GW=Groundwater G=Glass HNO <sub>3</sub> NaOH S=Soil/Sludge O=Oil Other Na <sub>2</sub> SO <sub>4</sub> E=Extract X=Other A=Air (filter or tube)	
<b>Special Instructions</b>				<b>Analysis Requested</b>		Pres. Upon Receipt (Y/N)	
<b>Client Sample ID</b>		<b>Sample Description</b>		<b>Sample Time</b>		<b>Wipe Area / Air Volume</b>	
				Start Stop			
LE122116-P-WC-12		Cor 121		12-21		X	
LE122116-P-COF-13		room 110					
LE122116-P-COF-14		room 108					
LE122116-P-COF-15		room 106					
LE122116-P-COF-16		room 108					
LE122116-P-COF-17		room 104					
LE122116-P-COF-18		room 102					
LE122116-P-COF-19		room 113					
LE122116-P-GF-21		library work room					
LE122116-P-CF-22							
<b>Chain of Custody</b>		Relinquished By (Signature): <i>[Signature]</i> Relinquished By (Print Name): <i>Kyle Ames</i> Company Name: <i>Fulcrum</i>		Date: 12-21-16 Time: 1200		<b>Chain of Custody</b>	
<b>Chain of Custody</b>		Relinquished By (Signature): <i>[Signature]</i> Relinquished By (Print Name): <i>[Signature]</i> Company Name: <i>[Signature]</i>		Date: <i>[Signature]</i> Time: <i>[Signature]</i>		<b>Chain of Custody</b>	
<b>Chain of Custody</b>		Relinquished By (Signature): <i>[Signature]</i> Relinquished By (Print Name): <i>[Signature]</i> Company Name: <i>[Signature]</i>		Date: <i>[Signature]</i> Time: <i>[Signature]</i>		<b>Chain of Custody</b>	
<b>Chain of Custody</b>		Relinquished By (Signature): <i>[Signature]</i> Relinquished By (Print Name): <i>[Signature]</i> Company Name: <i>[Signature]</i>		Date: <i>[Signature]</i> Time: <i>[Signature]</i>		<b>Chain of Custody</b>	



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

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# Request for Environmental and IH Laboratory Analytical Services

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<b>ATTENTION TO:</b>		<b>RYAN MATHEWS</b>		<b>Purchase Order No.:</b>		<b>Client Job No.:</b>		<b>162017</b>	
<b>Lab Use Only</b>	<b>Project No.:</b>	<b>Client No.:</b>	<b>Date Logged In:</b>	<b>Logged In By:</b>	<b>Turnaround Request</b>	<b>Standard:</b>	<b>Yes</b>	<b>No</b>	<b>If 'No,' No. of Business Days:</b>
<b>Report Results To</b>	<b>Name:</b>	<b>Company:</b>	<b>Address:</b>	<b>City, State, Zip:</b>	<b>Drinking Water</b>	<b>Sample Purpose:</b>	<b>Information X</b>	<b>Regulatory</b>	<b>Accreditation (please list below):</b>
	<b>Name:</b>	<b>Company:</b>	<b>Address:</b>	<b>City, State, Zip:</b>	<b>Sample Only</b>	<b>System ID #:</b>	<b>DOH Source #:</b>	<b>Multiple Sources #:</b>	
	<b>Phone:</b>	<b>(509) 574-0839</b>	<b>Fax:</b>	<b>(509) 575-8453</b>	<b>Chemistry Analysis Key</b>	<b>Unpres:</b>	<b>H<sub>2</sub>SO<sub>4</sub></b>	<b>Matrix:</b>	<b>WW=Wastewater</b>
	<b>Call with Verbal Results:</b>	<b>Call with Verbal Results:</b>	<b>Email Results To:</b>	<b>aebybsk@efulcrum.net, CC: rmatthews@efulcrum.net</b>		<b>4°C</b>	<b>HCl</b>	<b>GW=Groundwater</b>	<b>SW=Surface Water</b>
	<b>Fax Results To:</b>	<b>Fax Results To:</b>	<b>Name:</b>	<b>Lorrie Boutillier</b>		<b>HNO<sub>3</sub></b>	<b>NaOH</b>	<b>S=Soil/Sludge</b>	<b>DW=Drinking Water</b>
	<b>Company:</b>	<b>Fulcrum Environmental</b>	<b>Email:</b>	<b>lboutillier@efulcrum.net</b>	<b>Analysis Requested</b>	<b>Other</b>	<b>Na<sub>2</sub>SO<sub>4</sub></b>	<b>E=Extract</b>	<b>O=Oil</b>
<b>Send Invoice To</b>	<b>Address:</b>	<b>406 North 2nd Street</b>	<b>City, State, Zip:</b>	<b>Yakima, WA, 98901</b>					<b>X=Other</b>
	<b>Phone:</b>	<b>(509) 574-0839</b>	<b>Fax:</b>	<b>(509) 575-8453</b>	<b>Pres. Upon Receipt (Y/N)</b>	<b>UNPR</b>	<b>DW</b>	<b>P</b>	<b>Container Type</b>
<b>Special Instructions</b>	<b>Sample Description</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Wipe Area / Air Volume</b>	<b>Preservation</b>	<b>Matrix</b>	<b>pH</b>	<b>No. Containers</b>	
<b>Client Sample ID</b>	<b>LE12116-P-CDF-23</b>	<b>100m</b>	<b>145</b>	<b>12-16</b>	<b>X</b>				<b>154</b>
	<b>LE12116-P-CF-24</b>	<b>100m</b>	<b>147</b>						<b>153</b>
	<b>LE12116-P-CF-25</b>	<b>100m</b>	<b>140</b>						<b>153</b>
	<b>LE12116-P-CDF-26</b>	<b>100m</b>	<b>142</b>						<b>146</b>
	<b>LE12116-P-CF-27</b>	<b>100m</b>	<b>155</b>						<b>148</b>
	<b>LE12116-P-CDF-28</b>	<b>100m</b>	<b>155</b>						<b>151</b>
	<b>LE12116-P-CF-29</b>	<b>100m</b>	<b>146</b>						<b>152</b>
	<b>LE12116-P-CDF-30</b>	<b>100m</b>	<b>146</b>						<b>117</b>
	<b>LE12116-P-CF-31</b>	<b>100m</b>	<b>148</b>						<b>117</b>
	<b>LE12116-P-CDF-32</b>	<b>100m</b>	<b>148</b>						<b>117</b>
	<b>LE12116-P-CF-33</b>	<b>100m</b>	<b>150</b>						<b>116</b>
<b>Chain of Custody</b>	<b>Relinquished By (Signature):</b>	<b>Date:</b>	<b>12-16</b>	<b>Time:</b>	<b>1200</b>	<b>Received By (Signature):</b>	<b>Date:</b>	<b>DEC 21 2016</b>	<b>Time:</b>
	<b>Relinquished By (Print Name):</b>	<b>Company Name:</b>	<b>Fulcrum</b>	<b>Method of Shipment:</b>		<b>Received By (Print Name):</b>	<b>Relinquished To:</b>	<b>Method of Shipment:</b>	
<b>Chain of Custody</b>	<b>Relinquished By (Signature):</b>	<b>Date:</b>		<b>Time:</b>		<b>Received By (Signature):</b>	<b>Date:</b>		<b>Time:</b>
	<b>Relinquished By (Print Name):</b>	<b>Company Name:</b>	<b>Fulcrum</b>	<b>Method of Shipment:</b>		<b>Received By (Print Name):</b>	<b>Relinquished To:</b>	<b>Method of Shipment:</b>	

Pennsylvania - HQ  
350 Hochberg Road  
Monroeville, PA 15146

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

724.325.1776 Phone  
724.733.1799 Fax

509.545.4989 Phone  
509.544.6010 Fax



**RJ LEE GROUP**  
DELIVERING SCIENTIFIC RESOLUTION

# Request for Environmental and IH Laboratory Analytical Services

W612104

Page 4 of 5

W612104, Page 15 of 16

<b>ATTENTION TO:</b>		<b>RYAN MATHEWS</b>		<b>Purchase Order No.:</b>		<b>Client Job No.:</b>		<b>162017</b>				
<b>Lab Use Only</b>	<b>Project No.:</b>	<b>Client No.:</b>		<b>Turnaround Request</b>	<b>Standard:</b>	<b>Yes</b>	<b>No</b>	<b>If 'No', No. of Business Days:</b>				
	<b>Date Logged In:</b>	<b>Logged In By:</b>			<b>Sample Purpose:</b>	<b>Information X Regulatory</b>						
	<b>Name:</b>	<b>Company:</b>		<b>Drinking Water</b>	<b>System ID #:</b>							
	<b>Address:</b>	<b>City, State, Zip:</b>		<b>Sample Only</b>	<b>DOH Source #:</b>							
	<b>Phone:</b>	<b>Fax:</b>			<b>Multiple Sources #s:</b>							
<b>Report Results To</b>	<b>Call with Verbal Results:</b>	<b>Email Results To:</b>		<b>Chemistry Analysis Key</b>	<b>Preservation:</b>	<b>Matrix:</b>	<b>Container:</b>					
	<b>Name:</b>	<b>Company:</b>			<b>Unpres</b>	<b>H<sub>2</sub>SO<sub>4</sub></b>	<b>WW=Wastewater</b>	<b>SW=Surface Water</b>	<b>P=Plastic</b>			
	<b>Address:</b>	<b>City, State, Zip:</b>			<b>4°C</b>	<b>HCl</b>	<b>GW=Groundwater</b>	<b>DW=Drinking Water</b>	<b>G=Glass</b>			
	<b>Phone:</b>	<b>Fax:</b>			<b>HNO<sub>3</sub></b>	<b>NaOH</b>	<b>S=Soil/Sludge</b>	<b>O=Oil</b>	<b>W=Wipe</b>			
	<b>Send Invoice To</b>	<b>Company:</b>			<b>Other</b>	<b>Na<sub>2</sub>SO<sub>4</sub></b>	<b>E=Extract</b>	<b>X=Other</b>	<b>A=Air (filter or tube)</b>			
	<b>Special Instructions</b>	<b>Sample Description</b>		<b>Analysis Requested</b>								
	<b>Client Sample ID</b>	<b>Sample Description</b>	<b>Sample Date</b>	<b>Start</b>	<b>Stop</b>	<b>Wipe Area / Air Volume</b>	<b>Pres. Upon Receipt (Y/N)</b>	<b>Preservation</b>	<b>Matrix</b>	<b>Container Type</b>	<b>pH</b>	<b>No. Containers</b>
	LE122116-P-CDF-34	room 150	12-21				X					
	LE122116-P-CF-35	room 152										
	LE122116-P-CDF-36	room 152										
	LE122116-P-CF-37	room 154										
	LE122116-P-CDF-38	room 154										
	LE122116-P-CF-39	room 164										
	LE122116-P-CDF-40	room 164										
	LE122116-P-CF-41	room 168										
	LE122116-P-CDF-42	room 168										
	LE122116-P-WC-43	cor, 165										
	LE122116-P-RF-44	GYM										
<b>Chain of Custody</b>	<b>Relinquished By (Signature):</b>	<b>Date:</b>	<b>Time:</b>	<b>Chain of Custody</b>	<b>Received By (Signature):</b>	<b>Date:</b>	<b>Time:</b>					
	<b>Relinquished By (Print Name):</b>	<b>Relinquished To:</b>			<b>Received By (Print Name):</b>	<b>Relinquished To:</b>						
	<b>Company Name:</b>	<b>Method of Shipment:</b>			<b>Company Name:</b>	<b>Method of Shipment:</b>						
<b>Chain of Custody</b>	<b>Relinquished By (Signature):</b>	<b>Date:</b>	<b>Time:</b>	<b>Chain of Custody</b>	<b>Received By (Signature):</b>	<b>Date:</b>	<b>Time:</b>					
	<b>Relinquished By (Print Name):</b>	<b>Relinquished To:</b>			<b>Received By (Print Name):</b>	<b>Relinquished To:</b>						
	<b>Company Name:</b>	<b>Method of Shipment:</b>			<b>Company Name:</b>	<b>Method of Shipment:</b>						

Pennsylvania - HQ  
350 Hochberg Road  
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724.325.1776 Phone  
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2710 North 20th Avenue  
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509.544.6010 Fax





WOL 12104

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**RJ LEE GROUP**  
DELIVERING SCIENTIFIC RESOLUTION

## **ATTACHMENT E**

### Remedial Analytical Results







**Fremont**  
*Analytical*

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 School District Drinking Water - Lincoln Elementary**

**Work Order Number: 1701235**

January 24, 2017

**Attention Ryan Mathews:**

Fremont Analytical, Inc. received 41 sample(s) on 1/23/2017 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)

Original

[www.fremontanalytical.com](http://www.fremontanalytical.com)

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick School District Drinking Water -  
**Work Order:** 1701235

## Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1701235-001	LE12117-P-KF-01	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-002	LE12117-S-KF-01	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-003	LE12117-T-KF-01	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-004	LE12117-P-KF-02	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-005	LE12117-P-KF-03	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-006	LE12117-P-KF-05	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-007	LE12117-P-CF-14	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-008	LE12117-S-CF-14	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-009	LE12117-T-CF-14	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-010	LE12117-P-CDF-15	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-011	LE12117-P-CF-16	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-012	LE12117-S-CF-16	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-013	LE12117-T-CF-16	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-014	LE12117-P-CDF-17	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-015	LE12117-P-CDF-19	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-016	LE12117-P-OF-21	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-017	LE12117-P-CDF-23	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-018	LE12117-P-OF-24	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-019	LE12117-P-CDF-26	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-020	LE12117-S-CDF-26	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-021	LE12117-T-CDF-26	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-022	LE12117-P-CDF-28	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-023	LE12117-P-CDF-32	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-024	LE12117-P-CDF-34	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-025	LE12117-S-CDF-34	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-026	LE12117-T-CDF-34	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-027	LE12117-P-CDF-36	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-028	LE12117-P-CDF-40	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-029	LE12117-P-CDF-42	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-030	LE12117-S-CDF-42	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-031	LE12117-T-CDF-42	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-032	LE12117-P-OF-47	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-033	LE12117-P-CDF-48	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-034	LE12117-S-CDF-48	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-035	LE12117-T-CDF-48	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-036	LE12117-P-CDF-49	01/21/2017 8:00 AM	01/23/2017 12:25 PM

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**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick School District Drinking Water -  
**Work Order:** 1701235

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## Work Order Sample Summary

---

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1701235-037	LE12117-S-CDF-49	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-038	LE12117-T-CDF-49	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-039	LE12117-P-CF-50	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-040	LE12117-P-CF-35	01/21/2017 8:00 AM	01/23/2017 12:25 PM
1701235-041	LE12117-P-CDF-51	01/21/2017 8:00 AM	01/23/2017 12:25 PM

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**CLIENT:** Fulcrum Environmental**Project:** Kennewick School District Drinking Water - Lincoln Elementary

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## 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:

1701235-001A 202798: Prep Comments for EPA200.8, Sample 1701235-001A: Turbidity: 0.06 NTU  
1701235-004A 202799: Prep Comments for EPA200.8, Sample 1701235-004A: Turbidity: 0.02 NTU  
1701235-005A 202800: Prep Comments for EPA200.8, Sample 1701235-005A: Turbidity: 0.32 NTU  
1701235-006A 202801: Prep Comments for EPA200.8, Sample 1701235-006A: Turbidity: 0.01 NTU  
1701235-007A 202802: Prep Comments for EPA200.8, Sample 1701235-007A: Turbidity: 0.05 NTU  
1701235-010A 202803: Prep Comments for EPA200.8, Sample 1701235-010A: Turbidity: 0.01 NTU  
1701235-011A 202804: Prep Comments for EPA200.8, Sample 1701235-011A: Turbidity: 0.03 NTU  
1701235-014A 202805: Prep Comments for EPA200.8, Sample 1701235-014A: Turbidity: 0.01 NTU  
1701235-015A 202806: Prep Comments for EPA200.8, Sample 1701235-015A: Turbidity: 0.05 NTU  
1701235-016A 202807: Prep Comments for EPA200.8, Sample 1701235-016A: Turbidity: 0.15 NTU  
1701235-017A 202808: Prep Comments for EPA200.8, Sample 1701235-017A: Turbidity: 0.09 NTU  
1701235-018A 202812: Prep Comments for EPA200.8, Sample 1701235-018A: Turbidity: 0.02 NTU  
1701235-019A 202813: Prep Comments for EPA200.8, Sample 1701235-019A: Turbidity: 0.01 NTU  
1701235-022A 202814: Prep Comments for EPA200.8, Sample 1701235-022A: Turbidity: 0.01 NTU  
1701235-023A 202815: Prep Comments for EPA200.8, Sample 1701235-023A: Turbidity: 0.01 NTU  
1701235-024A 202816: Prep Comments for EPA200.8, Sample 1701235-024A: Turbidity: 0.01 NTU  
1701235-027A 202817: Prep Comments for EPA200.8, Sample 1701235-027A: Turbidity: 0.01 NTU  
1701235-028A 202818: Prep Comments for EPA200.8, Sample 1701235-028A: Turbidity: 0.01 NTU  
1701235-029A 202819: Prep Comments for EPA200.8, Sample 1701235-029A: Turbidity: 0.01 NTU  
1701235-032A 202820: Prep Comments for EPA200.8, Sample 1701235-032A: Turbidity: 0.06 NTU  
1701235-033A 202821: Prep Comments for EPA200.8, Sample 1701235-033A: Turbidity: 0.01 NTU  
1701235-036A 202822: Prep Comments for EPA200.8, Sample 1701235-036A: Turbidity: 0.01 NTU  
1701235-039A 202823: Prep Comments for EPA200.8, Sample 1701235-039A: Turbidity: 0.01 NTU  
1701235-041A 202937: Prep Comments for EPA200.8, Sample 1701235-041A: 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: 1701235  
Date Reported: 1/24/2017

**CLIENT:** Fulcrum Environmental

**Project:** Kennewick School District Drinking Water - Lincoln Elementary

**Lab ID:** 1701235-001

**Client Sample ID:** LE12117-P-KF-01

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15997 Analyst: TN

Copper	1,520	0.500		µg/L	1	1/23/2017 7:22:13 PM
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**Lab ID:** 1701235-004

**Client Sample ID:** LE12117-P-KF-02

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15997 Analyst: TN

Copper	1,300	0.500		µg/L	1	1/23/2017 7:25:49 PM
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**Lab ID:** 1701235-005

**Client Sample ID:** LE12117-P-KF-03

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15997 Analyst: TN

Copper	1,410	0.500		µg/L	1	1/23/2017 7:29:26 PM
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## Analytical Report

Work Order: 1701235  
Date Reported: 1/24/2017

**CLIENT:** Fulcrum Environmental

**Project:** Kennewick School District Drinking Water - Lincoln Elementary

**Lab ID:** 1701235-006

**Client Sample ID:** LE12117-P-KF-05

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15997 Analyst: TN

Copper	1,160	0.500		µg/L	1	1/23/2017 7:33:02 PM
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**Lab ID:** 1701235-007

**Client Sample ID:** LE12117-P-CF-14

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15997 Analyst: TN

Copper	1,190	0.500		µg/L	1	1/23/2017 7:36:39 PM
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**Lab ID:** 1701235-010

**Client Sample ID:** LE12117-P-CDF-15

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15997 Analyst: TN

Copper	1,140	0.500		µg/L	1	1/23/2017 7:47:29 PM
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## Analytical Report

Work Order: 1701235  
Date Reported: 1/24/2017

**CLIENT:** Fulcrum Environmental

**Project:** Kennewick School District Drinking Water - Lincoln Elementary

**Lab ID:** 1701235-011

**Client Sample ID:** LE12117-P-CF-16

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15997

Analyst: TN

Copper	960	0.500		µg/L	1	1/23/2017 7:51:06 PM
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**Lab ID:** 1701235-014

**Client Sample ID:** LE12117-P-CDF-17

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15997

Analyst: TN

Copper	1,180	0.500		µg/L	1	1/23/2017 7:54:42 PM
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**Lab ID:** 1701235-015

**Client Sample ID:** LE12117-P-CDF-19

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15997

Analyst: TN

Copper	1,260	0.500		µg/L	1	1/23/2017 7:58:19 PM
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## Analytical Report

Work Order: 1701235  
Date Reported: 1/24/2017

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick School District Drinking Water - Lincoln Elementary

**Lab ID:** 1701235-016 **Collection Date:** 1/21/2017 8:00:00 AM  
**Client Sample ID:** LE12117-P-OF-21 **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 15997		Analyst: TN
Copper	1,450	0.500		µg/L	1	1/23/2017 8:01:55 PM

**Lab ID:** 1701235-017 **Collection Date:** 1/21/2017 8:00:00 AM  
**Client Sample ID:** LE12117-P-CDF-23 **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 15998		Analyst: TN
Copper	1,170	0.500		µg/L	1	1/23/2017 8:16:22 PM

**Lab ID:** 1701235-018 **Collection Date:** 1/21/2017 8:00:00 AM  
**Client Sample ID:** LE12117-P-OF-24 **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 15998		Analyst: TN
Copper	971	0.500		µg/L	1	1/23/2017 8:38:03 PM



## Analytical Report

Work Order: 1701235  
Date Reported: 1/24/2017

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick School District Drinking Water - Lincoln Elementary

**Lab ID:** 1701235-019 **Collection Date:** 1/21/2017 8:00:00 AM  
**Client Sample ID:** LE12117-P-CDF-26 **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 15998		Analyst: TN
Copper	1,090	0.500		µg/L	1	1/23/2017 8:41:40 PM

**Lab ID:** 1701235-022 **Collection Date:** 1/21/2017 8:00:00 AM  
**Client Sample ID:** LE12117-P-CDF-28 **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 15998		Analyst: TN
Copper	1,230	0.500		µg/L	1	1/23/2017 8:45:16 PM

**Lab ID:** 1701235-023 **Collection Date:** 1/21/2017 8:00:00 AM  
**Client Sample ID:** LE12117-P-CDF-32 **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 15998		Analyst: TN
Copper	1,330	0.500		µg/L	1	1/23/2017 8:48:52 PM



## Analytical Report

Work Order: 1701235  
Date Reported: 1/24/2017

**CLIENT:** Fulcrum Environmental

**Project:** Kennewick School District Drinking Water - Lincoln Elementary

**Lab ID:** 1701235-024

**Client Sample ID:** LE12117-P-CDF-34

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15998 Analyst: TN

Copper	1,230	0.500		µg/L	1	1/23/2017 8:52:28 PM
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**Lab ID:** 1701235-027

**Client Sample ID:** LE12117-P-CDF-36

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15998 Analyst: TN

Copper	1,170	0.500		µg/L	1	1/23/2017 8:56:05 PM
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**Lab ID:** 1701235-028

**Client Sample ID:** LE12117-P-CDF-40

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15998 Analyst: TN

Copper	1,190	0.500		µg/L	1	1/23/2017 8:59:41 PM
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## Analytical Report

Work Order: 1701235  
Date Reported: 1/24/2017

**CLIENT:** Fulcrum Environmental

**Project:** Kennewick School District Drinking Water - Lincoln Elementary

**Lab ID:** 1701235-029

**Client Sample ID:** LE12117-P-CDF-42

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15998

Analyst: TN

Copper	1,100	0.500		µg/L	1	1/23/2017 9:03:18 PM
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**Lab ID:** 1701235-032

**Client Sample ID:** LE12117-P-OF-47

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15998

Analyst: TN

Copper	1,220	0.500		µg/L	1	1/23/2017 9:14:09 PM
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**Lab ID:** 1701235-033

**Client Sample ID:** LE12117-P-CDF-48

**Collection Date:** 1/21/2017 8:00:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 15998

Analyst: TN

Copper	1,680	0.500		µg/L	1	1/23/2017 9:17:46 PM
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## Analytical Report

Work Order: 1701235  
Date Reported: 1/24/2017

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick School District Drinking Water - Lincoln Elementary

**Lab ID:** 1701235-036 **Collection Date:** 1/21/2017 8:00:00 AM  
**Client Sample ID:** LE12117-P-CDF-49 **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 15998	Analyst: TN	
Copper	959	0.500		µg/L	1	1/23/2017 9:21:22 PM

**Lab ID:** 1701235-039 **Collection Date:** 1/21/2017 8:00:00 AM  
**Client Sample ID:** LE12117-P-CF-50 **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 15998	Analyst: TN	
Copper	ND	0.500		µg/L	1	1/23/2017 9:24:58 PM

**Lab ID:** 1701235-041 **Collection Date:** 1/21/2017 8:00:00 AM  
**Client Sample ID:** LE12117-P-CDF-51 **Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16006	Analyst: TN	
Copper	1,150	0.500	B	µg/L	1	1/24/2017 12:21:51 AM

**Work Order:** 1701235  
**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick School District Drinking Water -

## QC SUMMARY REPORT

### Drinking Water Metals by EPA Method 200.8

Sample ID	MB-16006	SampType:	MBLK			Units:	µg/L			Prep Date:	1/23/2017			RunNo:	34027		
Client ID:	MBLKW	Batch ID:	16006			Analysis Date:					1/23/2017			SeqNo:	647625		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual					

Copper	1.99	0.500									
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Sample ID	LCS-16006	SampType:	LCS	Units:	µg/L	Prep Date:	1/23/2017	RunNo:	34027		
Client ID:	LCSW	Batch ID:	16006			Analysis Date:	1/23/2017	SeqNo:	647626		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	92.5	0.500	100.0	0	92.5	85	115				
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Sample ID	1701233-025ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/23/2017	RunNo:	34027		
Client ID:	BATCH	Batch ID:	16006			Analysis Date:	1/24/2017	SeqNo:	647630		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	ND	0.500						0		30	
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Sample ID	1701233-025AMS	SampType:	MS	Units:	µg/L	Prep Date:	1/23/2017	RunNo:	34027		
Client ID:	BATCH	Batch ID:	16006	Analysis Date:				1/24/2017	SeqNo:	647631	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	167	0.500	200.0	0	83.7	70	130				
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Sample ID	1701233-025AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	1/23/2017	RunNo:	34027		
Client ID:	BATCH	Batch ID:	16006	Analysis Date:				1/24/2017	SeqNo:	647632	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	186	0.500	200.0	0	92.9	70	130	167.5	10.4	30	
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**Work Order:** 1701235  
**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick School District Drinking Water -

## QC SUMMARY REPORT

### Drinking Water Metals by EPA Method 200.8

Sample ID	MB-15998	SampType:	MBLK		Units:	µg/L		Prep Date:	1/23/2017		RunNo:	34025	
Client ID:	MBLKW	Batch ID:	15998					Analysis Date:	1/23/2017		SeqNo:	647526	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		ND	0.500										

Sample ID	LCS-15998	SampType:	LCS		Units:	µg/L		Prep Date:	1/23/2017		RunNo:	34025	
Client ID:	LCSW	Batch ID:	15998					Analysis Date:	1/23/2017		SeqNo:	647527	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		94.1	0.500	100.0	0	94.1	85	115					

Sample ID	1701235-017ADUP	SampType:	DUP		Units:	µg/L		Prep Date:	1/23/2017		RunNo:	34025	
Client ID:	LE12117-P-CDF-23	Batch ID:	15998					Analysis Date:	1/23/2017		SeqNo:	647529	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		1,090	0.500						1,167		6.49	30	

Sample ID	1701235-017AMS	SampType:	MS		Units:	µg/L		Prep Date:	1/23/2017		RunNo:	34025	
Client ID:	LE12117-P-CDF-23	Batch ID:	15998					Analysis Date:	1/23/2017		SeqNo:	647532	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		1,360	0.500	200.0	1,167	94.9	70	130					

Sample ID	1701235-017AMSD	SampType:	MSD		Units:	µg/L		Prep Date:	1/23/2017		RunNo:	34025	
Client ID:	LE12117-P-CDF-23	Batch ID:	15998					Analysis Date:	1/23/2017		SeqNo:	647533	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		1,400	0.500	200.0	1,167	115	70	130	1,357		2.89	30	

Work Order: 1701235

CLIENT: Fulcrum Environmental

Project: Kennewick School District Drinking Water -

## QC SUMMARY REPORT

### Drinking Water Metals by EPA Method 200.8

Sample ID	MB-15997	SampType:	MBLK	Units:	µg/L	Prep Date:	1/23/2017	RunNo:	34024			
Client ID:	MBLKW	Batch ID:	15997			Analysis Date:	1/23/2017	SeqNo:	647478			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	ND	0.500										
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Sample ID	LCS-15997	SampType:	LCS	Units:	µg/L	Prep Date:	1/23/2017	RunNo:	34024		
Client ID:	LCSW	Batch ID:	15997			Analysis Date:	1/23/2017	SeqNo:	647479		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	87.4	0.500	100.0	0	87.4	85	115					
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Sample ID	1701233-013ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/23/2017	RunNo:	34024		
Client ID:	BATCH	Batch ID:	15997			Analysis Date:	1/23/2017	SeqNo:	647481		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	1,130	0.500							1,157	2.37	30	
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Sample ID	1701233-013AMS	SampType:	MS	Units:	µg/L	Prep Date:	1/23/2017	RunNo:	34024			
Client ID:	BATCH	Batch ID:	15997			Analysis Date:	1/23/2017	SeqNo:	647482			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	1,230	0.500	200.0	1,157	35.0	70	130					S
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**NOTES:**

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID	1701233-013AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	1/23/2017	RunNo:	34024			
Client ID:	BATCH	Batch ID:	15997			Analysis Date:	1/23/2017	SeqNo:	647483			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	1,260	0.500	200.0	1,157	50.7	70	130	1,227	2.53	30	S
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**NOTES:**

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.





Work Order Number: **1701235**  
Date Received: **1/23/2017 12:25:00 PM**

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐

2. How was the sample delivered? Client

3. Coolers are present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
4. Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
5. Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Required <input checked="" type="checkbox"/>
6. Was an attempt made to cool the samples?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
7. Were all items received at a temperature of >0°C to 10.0°C *	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>

8. Sample(s) in proper container(s)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
9. Sufficient sample volume for indicated test(s)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
10. Are samples properly preserved?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
11. Was preservative added to bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
			HNO3 <input type="checkbox"/>
12. Is there headspace in the VOA vials?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
13. Did all samples containers arrive in good condition(unbroken)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
14. Does paperwork match bottle labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
15. Are matrices correctly identified on Chain of Custody?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
16. Is it clear what analyses were requested?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
17. Were all holding times able to be met?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

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

Person Notified:	Amanda Enbysk	Date	1/23/2017
By Whom:	Erica Silva	Via:	<input checked="" type="checkbox"/> eMail <input checked="" type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	"P-CF-35" received, "P-CDF-51" received		
Client Instructions:	Add to COC and hold, add to COC and analyze		

HNO<sub>3</sub> to 002A, 003A, 008A, 009A, 011A, 012A, 020A, 021A, 025A, 026A, 030A, 031A, 034A, 035A, 037A, 038A.

Item #	Temp °C
Cooler	10.9
Sample	9.4

Original



# Fremont

Analytical

3600 Fremont Ave N.  
Seattle, WA 98103

Tel: 206-352-3790  
Fax: 206-352-7178

Client: Fulcrum Environmental Consulting

Address: 406 North Second Street

City, State, Zip: Yakima, WA 98901

Telephone: 509.574.0839

Fax: 509.545.8453

Project Name:

Project No:

Location:

Report To (PM):

PM Email:

Date: 1/21/2017

Page: 4 of 4

Laboratory Project No (Internal): 1701235

Lincoln Elementary, Kennewick, WA

Collected by: Amanda Embry & Nathan Boston

ryan.mathews@fulcrum.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)	GV/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 - SIM)	Metals** (EPA 6020 / 200.8)	Total (T)   Dissolved (D)	Anions (IC)**	EDB (801.1)	Comments
LE12117-P-KF-01	1/21/17	0800	DW														H <sub>2</sub> O <sub>2</sub> pres.
LE12117-S-KF-01	1/21/17	0800	DW														HOLD; unpr.
LE12117-T-KF-01																	H <sub>2</sub> O <sub>2</sub> pres.
LE12117-P-KF-02																	HOLD; unpr.
LE12117-P-KF-03																	H <sub>2</sub> O <sub>2</sub> pres.
LE12117-P-KF-05																	HOLD; unpr.
LE12117-P-CF-14																	HOLD; unpr.
LE12117-S-CF-14																	HOLD; unpr.
LE12117-T-CF-14																	HOLD; unpr.
LE12117-P-CF-15																	H <sub>2</sub> O <sub>2</sub> pres.

\*\*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 U V Zn

\*\*\*Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite Turn-around times for samples received after 4:00pm will begin on the following business day.

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.)

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

Received

Date/Time

TAT: ASAP

Relinquished

Received

Date/Time

TAT → SameDay\* NextDay\* 2 Day 3 Day STD

\*Please coordinate with the lab in advance





3600 Fremont Ave N.  
Seattle, WA 98103

Tel: 206-352-3790  
Fax: 206-352-7178

Client: Fulcrum Environmental Consulting  
Address: 406 North Second Street  
City, State, Zip: Yakima, WA 98901  
Telephone: 509.574.0839 Fax: 509.545.8453

Project Name: Kennecott SD Drinking Water - Lincoln Elementary  
Project No: 162017  
Location: Lincoln Elementary, Kennecott, WA  
Report To (PM): Ryan Mathews  
PM Email: rmathews@fulcrum.net; cc: aenbysk@fulcrum.net

# Chain of Custody Record and Laboratory Services Agreement

Date: 1/21/2017 Laboratory Project No (Internal): 1701235  
Page: 2 of: 4

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GV/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)	Comments
LE12117-P-CF-16	1/21/17	0800	DW														H <sub>2</sub> O <sub>2</sub> preserved
LE12117-S-CF-16																	H <sub>2</sub> O <sub>2</sub> ; unpreserved
LE12117-T-CF-16																	H <sub>2</sub> O <sub>2</sub> ; unpreserved
LE12117-P-CF-17																	HNO <sub>3</sub> preserved
LE12117-P-CF-19																	
LE12117-P-CF-21																	
LE12117-P-CF-23																	
LE12117-P-CF-24																	
LE12117-P-CF-26																	
LE12117-S-CF-26																	H <sub>2</sub> O <sub>2</sub> ; unpreserved

\*\*Metals Analysis (Circle): MTC-A5 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 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.)

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 1/21/2017; 1600 Received 1/22/17 1225

Reiminished 1/23/2017; 1025 Received 1/22/17 1225

TAT: ASAP

Please preserve all unpreserved samples

TAT: SameDay\* NextDay\* 2 Day 3 Day STD

\*Please coordinate with the lab in advance





# Chain of Custody Record and Laboratory Services Agreement

3600 Fremont Ave N.  
Seattle, WA 98103

Tel: 206-352-3790  
Fax: 206-352-7178

Client: Fulcrum Environmental Consulting

Address: 406 North Second Street  
Yakima, WA 98901

City, State, Zip: 509, 574, 0839

Telephone: 509, 574, 0839

Fax: 509, 545, 8453

PM Email:

rmathews@fulcrum.net; cc: aenbysk@fulcrum.net

Project Name:

Project No:

Location:

Report To (PM):

PM Email:

Date: 1/21/2017

Laboratory Project No (Internal):

Page: 3 of 4

Kennewick SD Drinking Water - Lincoln Elementary  
162017  
Collected by: Amanda Ely & Nathaniel

Lincoln Elementary, Kennewick, WA

Ryan Mathews

\*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)	GV/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DH)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T)   Dissolved (D)	Anions (IC)***	EDB (801.1)	Comments
LE12117-T-CDF-26	1/21/17	0800	DW														HOLD; unpreserved
LE12117-P-CDF-28	1/21/17																H1N3 preserved
LE12117-P-CDF-32																	
LE12117-P-CDF-34																	
LE12117-S-CDF-34																	HOLD; unpreserved
LE12117-T-CDF-34																	HOLD; unpreserved
LE12117-P-CDF-36																	H1N3 preserved
LE12117-P-CDF-40																	
LE12117-P-CDF-42																	
LE12117-S-CDF-42																	HOLD; unpreserved

\*\*\*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.)

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: Amelia McGee Date/Time: 1/24/2017; 1600 Received: OK Date/Time: 1/23/17 1225

Relinquished: Amelia McGee Date/Time: 1/23/2017; 1600 Received: OK Date/Time: 1/23/17 1225

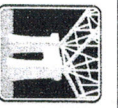
Special Remarks: Please preserve all unpreserved samples

TAT: ASAP

TAT → SameDay^ NextDay^ 2 Day 3 Day STD

Please coordinate with the lab in advance





# Fremont

## Chain of Custody Record and Laboratory Services Agreement

3600 Fremont Ave N.  
Seattle, WA 98103

Tel: 206-352-3790  
Fax: 206-352-7178

Client: Fulcrum Environmental Consulting

Address: 406 North Second Street

City, State, Zip: Yakima, WA 98901

Telephone: 509.574.0839

Fax: 509.545.8453

Project Name:

Project No:

Location:

Report To (PM):

PM Email:

Date: 1/21/2017

Laboratory Project No (Internal):

Page: 4 of 45

Kennewick SD Drinking Water - Lincoln Elementary

Collected by: Amanda Eny-Ko Nathan Peterson

Lincoln Elementary, Kennewick, WA

Ryan Mathews

rmathews@fulcrum.net; cc: aenbyk@fulcrum.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)*	VOGs (EPA 8260 / 624)	GY/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCD)	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 (801)	Comments
LE12117-T-COF-42	1/21/17	0800	DL														HOLD; unpreserved
LE12117-P-OF-47																	HNO3 preserved
LE12117-P-COF-48																	↓
LE12117-S-COF-48																	HOLD; unpres.
LE12117-T-COF-48																	HOLD; unpres.
LE12117-P-COF-49																	HNO3 preserved
LE12117-S-COF-49																	HOLD; unpres.
LE12117-T-COF-49																	HOLD; unpres.
LE12117-P-CF-50																	HNO3 preserved
LE12117-P-CF-35																	HOLD

\*\*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.)

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.

Requisitioned Date/Time: 1/21/2017, 16:00 Received Date/Time: 1/23/17 12:25

Formal Disposal Date/Time: 1/23/2017, 12:25

Special Remarks:

Please preserve all unpreserved samples

TAT: ASAP

TAT → SameDay<sup>®</sup> NextDay<sup>®</sup> 2 Day 3 Day STD

Please coordinate with the lab in advance





**3600 Fremont Ave N.  
Seattle, WA 98103**

**Tel: 206-352-3790  
Fax: 206-352-7178**

**Tel: 206-352-3790**  
**Fax: 206-352-7178**

**Seattle, WA 98103** **Fax: 206-352-7178**

**Fax: 206-352-7178**

**Project Name:**

**Project No:**

**Project Name:**

**Project No:**

**Location:**

**Location:**

**Report To (PM):**

**Report To (PM):**

Fax:

Fax:

**PM Email:**

**PM Email:**

\*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

[illegible]



**Fremont**  
*Analytical*

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 - Lincoln Elementary Follow-Up Sampling**  
**Work Order Number: 1701341**

February 01, 2017

**Attention Ryan Mathews:**

Fremont Analytical, Inc. received 17 sample(s) on 1/30/2017 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  
**Project:** Kennewick SD - Lincoln Elementary Follow-  
**Work Order:** 1701341

## Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1701341-001	LE12817-P-KF-02	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-002	LE12817-S-KF-02	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-003	LE12817-T-KF-02	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-004	LE12817-P-KF-03	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-005	LE12817-S-KF-03	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-006	LE12817-T-KF-03	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-007	LE12817-P-CDF-10	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-008	LE12817-S-CDF-19	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-009	LE12817-T-CDF-19	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-010	LE12817-P-OF-21	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-011	LE12817-S-OF-21	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-012	LE12817-T-OF-21	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-013	LE12817-P-CDF-32	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-014	LE12817-S-CDF-32	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-015	LE12817-T-CDF-32	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-016	LE12817-P-WC-53	01/28/2017 10:50 AM	01/30/2017 9:10 AM
1701341-017	LE12817-P-WC-54	01/28/2017 10:50 AM	01/30/2017 9:10 AM

---

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD - Lincoln Elementary Follow-Up 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:

1701341-003A 204405: Prep Comments for EPA200.8, Sample 1701341-003A: Turbidity: 0.01 NTU  
1701341-006A 204406: Prep Comments for EPA200.8, Sample 1701341-006A: Turbidity: 0.23 NTU  
1701341-012A 204407: Prep Comments for EPA200.8, Sample 1701341-012A: Turbidity: 0.02 NTU  
1701341-015A 204408: Prep Comments for EPA200.8, Sample 1701341-015A: Turbidity: 0.05 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: 1701341  
Date Reported: 2/1/2017

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD - Lincoln Elementary Follow-Up Sampling

**Lab ID:** 1701341-003

**Client Sample ID:** LE12817-T-KF-02

**Collection Date:** 1/28/2017 10:50:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 16089 Analyst: TN

Copper	1,110	0.500		µg/L	1	1/31/2017 6:39:35 PM
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**Lab ID:** 1701341-006

**Client Sample ID:** LE12817-T-KF-03

**Collection Date:** 1/28/2017 10:50:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 16089 Analyst: TN

Copper	1,010	0.500		µg/L	1	1/31/2017 6:50:26 PM
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**Lab ID:** 1701341-012

**Client Sample ID:** LE12817-T-OF-21

**Collection Date:** 1/28/2017 10:50:00 AM

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 16089 Analyst: TN

Copper	556	0.500		µg/L	1	1/31/2017 6:54:02 PM
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## Analytical Report

Work Order: 1701341

Date Reported: 2/1/2017

**CLIENT:** Fulcrum Environmental

**Project:** Kennewick SD - Lincoln Elementary Follow-Up Sampling

**Lab ID:** 1701341-015

**Collection Date:** 1/28/2017 10:50:00 AM

**Client Sample ID:** LE12817-T-CDF-32

**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Drinking Water Metals by EPA Method 200.8**

Batch ID: 16089

Analyst: TN

Copper	693	0.500		µg/L	1	1/31/2017 6:57:39 PM
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**Work Order:** 1701341  
**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD - Lincoln Elementary Follow-

## QC SUMMARY REPORT

### Drinking Water Metals by EPA Method 200.8

Sample ID	MB-16089	SampType:	MBLK			Units:	µg/L		Prep Date:	1/31/2017		RunNo:	34194	
Client ID:	MBLKW	Batch ID:	16089			Analysis Date:				1/31/2017		SeqNo: 651595		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Copper		ND	0.500											

Sample ID	LCS-16089	SampType:	LCS			Units:	µg/L		Prep Date:	1/31/2017		RunNo:	34194	
Client ID:	LCSW	Batch ID:	16089			Analysis Date:				1/31/2017		SeqNo: 651596		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Copper		112	0.500	100.0	0	112	85	115						

Sample ID	1701340-033ADUP	SampType:	DUP			Units:	µg/L		Prep Date:	1/31/2017		RunNo:	34194	
Client ID:	BATCH	Batch ID:	16089			Analysis Date:				1/31/2017		SeqNo: 651598		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Copper		1,310	0.500						1,344	2.78	30			

Sample ID	1701340-033AMS	SampType:	MS			Units:	µg/L		Prep Date:	1/31/2017		RunNo:	34194	
Client ID:	BATCH	Batch ID:	16089			Analysis Date:				1/31/2017		SeqNo: 651599		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Copper		1,570	0.500	200.0	1,344	111	70	130						

Sample ID	1701340-033AMSD	SampType:	MSD			Units:	µg/L		Prep Date:	1/31/2017		RunNo:	34194	
Client ID:	BATCH	Batch ID:	16089			Analysis Date:				1/31/2017		SeqNo: 651600		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Copper		1,530	0.500	200.0	1,344	93.3	70	130	1,566	2.26	30			

Client Name: **FE**  
 Logged by: **Erica Silva**

Work Order Number: **1701341**  
 Date Received: **1/30/2017 9:10:00 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 ☐  
 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 °C
Cooler	4.5
Sample	8.1

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





**Fremont**  
Analytical

3600 Fremont Ave N.  
Seattle, WA 98103

Tel: 206-352-3790  
Fax: 206-352-7178

Client: Fulcrum Environmental Consulting  
Address: 406 North Second Street  
City, State, Zip: Yakima, WA 98901  
Telephone: 509.574.0839 Fax: 509.545.8453

Project Name: Kennewick SD - Lincoln Elementary Follow-Up Sampling  
Project No: 162017  
Location: Lincoln Elementary School, Kennewick, WA  
Report To (PM): Ryan Mathews  
PM Email: rmathews@fulcrum.net; cc: aenbysk@fulcrum.net

Date: 1/28/2017

Laboratory Project No (Internal): 1701341

Page: 1 of 2

# Chain of Custody Record and Laboratory Services Agreement

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GW/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)	Comments
LE12817-P-KF-02	1/28/2017	1650	DW														
LE12817-S-KF-02																	
LE12817-T-KF-02																	
LE12817-P-KF-03																	
LE12817-S-KF-03																	
LE12817-T-KF-03																	
LE12817-P-COF-19																	
LE12817-S-COF-19																	
LE12817-T-COF-19																	
LE12817-P-COF-21																	

\*\*\*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 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.)

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 x Date/Time 1/28/2017: 1530 Received x Date/Time 1/30/17 0910

Relinquished x Date/Time Received x Date/Time

TAT: ASAP

Special Remarks: All samples HNO3 preserved

TAT -> SameDay^ NextDay^ 2 Day 3 Day STD

\*Please coordinate with the lab in advance





## Page 10 of 10

COC 1.1 - 4.5.16 - 1 of 2



**Fremont**  
*Analytical*

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 - Lincoln Elementary**  
**Work Order Number: 1703046**

March 13, 2017

**Attention Ryan Mathews:**

Fremont Analytical, Inc. received 13 sample(s) on 3/6/2017 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

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

Original

[www.fremontanalytical.com](http://www.fremontanalytical.com)

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln Ele  
**Work Order:** 1703046

## Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1703046-001	LE3417-P-KF-01	03/04/2017 8:00 AM	03/06/2017 8:54 AM
1703046-002	LE3417-S-KF-01	03/04/2017 8:00 AM	03/06/2017 8:54 AM
1703046-003	LE3417-T-KF-01	03/04/2017 8:00 AM	03/06/2017 8:54 AM
1703046-004	LE3417-P-CDF-19	03/04/2017 8:00 AM	03/06/2017 8:54 AM
1703046-005	LE3417-P-OF-21	03/04/2017 8:00 AM	03/06/2017 8:54 AM
1703046-006	LE3417-P-CDF-32	03/04/2017 8:00 AM	03/06/2017 8:54 AM
1703046-007	LE3417-P-CDF-48	03/04/2017 8:00 AM	03/06/2017 8:54 AM
1703046-008	LE3417-S-CDF-48	03/04/2017 8:00 AM	03/06/2017 8:54 AM
1703046-009	LE3417-T-CDF-48	03/04/2017 8:00 AM	03/06/2017 8:54 AM
1703046-010	LE3417-P-WC-53	03/04/2017 8:00 AM	03/06/2017 8:54 AM
1703046-011	LE3417-P-WC-54	03/04/2017 8:00 AM	03/06/2017 8:54 AM
1703046-012	LE3417-P-KF-02	03/04/2017 8:00 AM	03/06/2017 8:54 AM
1703046-013	LE3417-P-KF-03	03/04/2017 8:00 AM	03/06/2017 8:54 AM

---

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln 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:

1703046-001A 209820: Prep Comments for EPA200.8, Sample 1703046-001A: Turbidity: 0.00 NTU  
1703046-004A 209821: Prep Comments for EPA200.8, Sample 1703046-004A: Turbidity: 0.00 NTU  
1703046-005A 209822: Prep Comments for EPA200.8, Sample 1703046-005A: Turbidity: 0.01 NTU  
1703046-006A 209823: Prep Comments for EPA200.8, Sample 1703046-006A: Turbidity: 0.00 NTU  
1703046-007A 209824: Prep Comments for EPA200.8, Sample 1703046-007A: Turbidity: 0.00 NTU  
1703046-010A 209825: Prep Comments for EPA200.8, Sample 1703046-010A: Turbidity: 0.00 NTU  
1703046-011A 209826: Prep Comments for EPA200.8, Sample 1703046-011A: Turbidity: 0.01 NTU  
1703046-012A 209829: Prep Comments for EPA200.8, Sample 1703046-012A: Turbidity 0.00 NTU  
1703046-013A 209833: Prep Comments for EPA200.8, Sample 1703046-013A: Turbidity 0.09 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: 1703046  
Date Reported: 3/13/2017

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln Elementary

**Lab ID:** 1703046-001  
**Client Sample ID:** LE3417-P-KF-01  
**Collection Date:** 3/4/2017 8:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16430	Analyst: TN	
Copper	1,160	0.500		µg/L	1	3/10/2017 9:54:54 PM

**Lab ID:** 1703046-004  
**Client Sample ID:** LE3417-P-CDF-19  
**Collection Date:** 3/4/2017 8:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16430	Analyst: TN	
Copper	1,260	0.500		µg/L	1	3/10/2017 9:58:56 PM

**Lab ID:** 1703046-005  
**Client Sample ID:** LE3417-P-OF-21  
**Collection Date:** 3/4/2017 8:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16430	Analyst: TN	
Copper	1,290	0.500		µg/L	1	3/10/2017 10:02:57 PM





## Analytical Report

Work Order: 1703046  
Date Reported: 3/13/2017

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln Elementary

**Lab ID:** 1703046-006  
**Client Sample ID:** LE3417-P-CDF-32  
**Collection Date:** 3/4/2017 8:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16430	Analyst: TN	
Copper	1,300	0.500		µg/L	1	3/10/2017 10:06:59 PM

**Lab ID:** 1703046-007  
**Client Sample ID:** LE3417-P-CDF-48  
**Collection Date:** 3/4/2017 8:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16430	Analyst: TN	
Copper	1,870	0.500		µg/L	1	3/10/2017 10:11:01 PM

**Lab ID:** 1703046-010  
**Client Sample ID:** LE3417-P-WC-53  
**Collection Date:** 3/4/2017 8:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16430	Analyst: TN	
Copper	ND	0.500		µg/L	1	3/10/2017 10:15:02 PM



## Analytical Report

Work Order: 1703046  
Date Reported: 3/13/2017

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln Elementary

**Lab ID:** 1703046-011  
**Client Sample ID:** LE3417-P-WC-54  
**Collection Date:** 3/4/2017 8:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16430		Analyst: TN
Copper	1,230	0.500		µg/L	1	3/10/2017 10:19:04 PM

**Lab ID:** 1703046-012  
**Client Sample ID:** LE3417-P-KF-02  
**Collection Date:** 3/4/2017 8:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16431		Analyst: TN
Copper	1,190	0.500		µg/L	1	3/10/2017 10:39:15 PM

**Lab ID:** 1703046-013  
**Client Sample ID:** LE3417-P-KF-03  
**Collection Date:** 3/4/2017 8:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16431		Analyst: TN
Copper	1,210	0.500		µg/L	1	3/10/2017 10:55:21 PM



**Work Order:** 1703046  
**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln Ele

## QC SUMMARY REPORT

### Drinking Water Metals by EPA Method 200.8

Sample ID	MB-16431	SampType:	MBLK		Units:	µg/L		Prep Date:	3/10/2017		RunNo:	34878	
Client ID:	MBLKW	Batch ID:	16431					Analysis Date:	3/10/2017		SeqNo:	666039	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		ND	0.500										

Sample ID	LCS-16431	SampType:	LCS		Units:	µg/L		Prep Date:	3/10/2017		RunNo:	34878	
Client ID:	LCSW	Batch ID:	16431					Analysis Date:	3/10/2017		SeqNo:	666040	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		91.0	0.500	100.0	0	91.0	85	115					

Sample ID	1703046-012ADUP	SampType:	DUP		Units:	µg/L		Prep Date:	3/10/2017		RunNo:	34878	
Client ID:	LE3417-P-KF-02	Batch ID:	16431					Analysis Date:	3/10/2017		SeqNo:	666042	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		1,190	0.500						1,195		0.223	30	

Sample ID	1703046-012AMS	SampType:	MS		Units:	µg/L		Prep Date:	3/10/2017		RunNo:	34878	
Client ID:	LE3417-P-KF-02	Batch ID:	16431					Analysis Date:	3/10/2017		SeqNo:	666043	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		1,350	0.500	200.0	1,195	75.9	70	130					

Sample ID	1703046-012AMSD	SampType:	MSD		Units:	µg/L		Prep Date:	3/10/2017		RunNo:	34878	
Client ID:	LE3417-P-KF-02	Batch ID:	16431					Analysis Date:	3/10/2017		SeqNo:	666044	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		1,380	0.500	200.0	1,195	93.8	70	130	1,346		2.63	30	

**Work Order:** 1703046  
**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln Ele

## QC SUMMARY REPORT

### Drinking Water Metals by EPA Method 200.8

Sample ID	MB-16430	SampType:	MBLK	Units:	µg/L	Prep Date:	3/6/2017	RunNo:	34877		
Client ID:	MBLKW	Batch ID:	16430			Analysis Date:	3/10/2017	SeqNo:	665991		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.500									

Sample ID	LCS-16430	SampType:	LCS	Units:	µg/L	Prep Date:	3/6/2017	RunNo:	34877		
Client ID:	LCSW	Batch ID:	16430	Analysis Date:				3/10/2017	SeqNo:	665992	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	91.3	0.500	100.0	0	91.3	85	115				

Sample ID	1703045-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	3/6/2017	RunNo:	34877		
Client ID:	BATCH	Batch ID:	16430			Analysis Date:	3/10/2017	SeqNo:	665994		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	821	0.500						881.8	7.10	30	

Sample ID	1703045-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	3/6/2017	RunNo:	34877		
Client ID:	BATCH	Batch ID:	16430			Analysis Date:	3/10/2017	SeqNo:	665995		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	1.010	0.500	200.0	881.8	66.6	70	130				S

**NOTES:**

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

Sample ID	1703045-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	3/6/2017	RunNo:	34877		
Client ID:	BATCH	Batch ID:	16430	Analysis Date:				3/10/2017	SeqNo:	665998	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	1.060	0.500	200.0	881.8	90.8	70	130	1.015	4.66	30	



Work Order Number: **1703046**  
Date Received: **3/6/2017 8:54:00 AM**

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐

2. How was the sample delivered? FedEx

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

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:

HNO3 added to 002A, 003A, 008A, 009A

Item #	Temp °C
Cooler	4.3
Sample	2.8

Original





# Fremont

Analytical

3600 Fremont Ave N.  
Seattle, WA 98103

Tel: 206-352-3790  
Fax: 206-352-7178

Client: Fulcrum Environmental Consulting

Address: 406 North Second Street  
Yakima, WA, 98901

City, State, Zip:

Telephone: 509.574.0839

Fax: 509.575.8453

## Chain of Custody Record and Laboratory Services Agreement

Date: 3/4/2017

Laboratory Project No (Internal): 1703046

Page: 1 of 2

Project Name: Kennewick SD Drinking Water - Lincoln Elementary

Project No: 162017.01

Collected by:

Location: Lincoln Elementary, Kennewick, WA

Report To (PM): Ryan Mathews

PM Email: rmathews@fulcrum.net, cc:aenbysk@fulcrum.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 (DO)	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)	Comments	
1 LB3417F-KF-01	3/4/2017	8AM	DW															
2 " -S-KF-01																		Hold
3 " -T-KF-01																		Hold
4 " -P-COF-09																		1
5 " -P-OF-21																		
6 " -P-COF-32																		
7 " -P-COF-48																		
8 " -S-COF-48																		Hold
9 " -T-COF-48																		Hold
10 " -P-UC-53																		

\*\*\*Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite Turn-around times for samples received after 4:00pm will begin on the following business day.

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.)

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 3/4/17 Received ☒ Date/Time 3/6/17 0854

Reinquired ☒ Date/Time Received ☒ Date/Time

TAI → SameDay\* NextDay\* 2 Day 3 Day STD

\*Please coordinate with the lab in advance





**3600 Fremont Ave N.  
Seattle, WA 98103**

**Tel: 206-352-3790  
Fax: 206-352-7178**

**3600 Fremont Ave N.  
Seattle, WA 98103**

**Tel: 206-352-3790  
Fax: 206-352-7178**

**Tel: 206-352-3790**  
**Fax: 206-352-7178**

**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 - Lincoln Elementary	
Project No:	162017.01	Collected by:
Location:	Lincoln Elementary, Kennewick, WA	
Report To (PM):	Ryan Mathews	
EM Email:	rmathews@efilicrum.net; cc: aarabysk@efilicrum.net	

PM Email: [pm@openstax.org](mailto:pm@openstax.org)

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

COC 11-4516-1 of 2





# Fremont

Analytical

3600 Fremont Ave N.  
Seattle, WA 98103

Tel: 206-352-3790  
Fax: 206-352-7178

## Chain of Custody Record and Laboratory Services Agreement

Date: 3/4/2017

Laboratory Project No (Internal): 1703046

Page: 1 of 2

Client: Fulcrum Environmental Consulting  
Address: 406 North Second Street  
City, State, Zip: Yakima, WA, 98901  
Telephone: 509.574.0839 Fax: 509.575.0453

Project Name: Kennewick SD Drinking Water - Lincoln Elementary  
Project No: 162017.01  
Location: Lincoln Elementary, Kennewick, WA  
Report To (PM): Ryan Mathews  
PM Email: mathews@fulcrum.net; ac.aenbysk@fulcrum.net

Collected by:

\*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)*	VOG (EPA 8260 / 624)	GV/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 808)	Metals** (EPA 8210 / 200.8)	Total (T)   Dissolved (D)	Anions (IC)**	EDB (8011)	Comments
1 LF3417P KF-01	3/4/2017	8AM	DW													
2 " -S-KF-01																Hold
3 " -T-KF-01																Hold
4 " -P-COF-19																Hold
5 " -P-OF-21																Hold
6 " -P-COF-32																Hold
7 " -P-COF-48																Hold
8 " -S-COF-48																Hold
9 " -T-COF-48																Hold
10 " -P-ic-53																Hold

Special Remarks: Preserve all unopened

TAT - ASAP

TAT - SameDay\* NextDay\* 2 Day 3 Day STD

\*Please coordinate with the lab in advance





**Fremont**  
Analytical

3600 Fremont Ave N.  
Seattle, WA 98103

Tel: 206-352-3790  
Fax: 206-352-7178

Client: Fulcrum Environmental Consulting

Address: 406 North Second Street

City, State, Zip: Yakima, WA, 98901

Telephone: 509.574.0839

Fax: 509.575.9453

Project Name:

Project No:

Location:

Report To (PM):

PM Email:

Date: 3/4/2017

Laboratory Project No (Internal): 1703046

Page: 4 of 2

# Chain of Custody Record and Laboratory Services Agreement

Project Name: Kennecott SD Drinking Water - Lincoln Elementary

Project No: 162017.01

Location: Lincoln Elementary, Kennecott, WA

Report To (PM): Ryan Matthews

PM Email: rmatthews@fulcrum.net; cc: aendysk@fulcrum.net

Collected by:

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

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 824)	GV/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DHO)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 / 625)	PCBs (EPA 8270 / 625)	Metals** (EPA 8210 / 608)	Total (T) / Dissolved (D)	Anions (IC)**	EDS (8011)	Comments	
1. LE3417-P-WC-54	3/4/2017	6AM	DW															
2. LE3417-P-KF-02																		
3. LE3417-P-KF-023																		
4. 3/4/17 255																		
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 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.)

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 3/4/17 - 12PM Received ☒ Date/Time 3/6/17 0654

Relinquished ☒ Date/Time Received ☒ Date/Time

TAI → SameDay\* NextDay\* 2 Day 3 Day STD

\*Please coordinate with the lab in advance



**Fremont**  
*Analytical*

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 - Lincoln Elementary**  
**Work Order Number: 1703211**

March 21, 2017

**Attention Ryan Mathews:**

Fremont Analytical, Inc. received 8 sample(s) on 3/20/2017 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)

Original

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**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln Ele  
**Work Order:** 1703211

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**Work Order Sample Summary**

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Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1703211-001	LE31817-P-CDF-19	03/18/2017 9:00 AM	03/20/2017 9:00 AM
1703211-002	LE31817-P-OF-21	03/18/2017 9:00 AM	03/20/2017 9:00 AM
1703211-003	LE31817-P-CDF-32	03/18/2017 9:00 AM	03/20/2017 9:00 AM
1703211-004	LE31817-P-CDF-48	03/18/2017 9:00 AM	03/20/2017 9:00 AM
1703211-005	LE31817-S-CDF-48	03/18/2017 9:00 AM	03/20/2017 9:00 AM
1703211-006	LE31817-T-CDF-48	03/18/2017 9:00 AM	03/20/2017 9:00 AM
1703211-007	LE31817-P-WC-53	03/18/2017 9:00 AM	03/20/2017 9:00 AM
1703211-008	LE31817-P-WC-54	03/18/2017 9:00 AM	03/20/2017 9:00 AM

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**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln Elementary

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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:

1703211-001A 211549: Prep Comments for EPA200.8, Sample 1703211-001A: 0.34 NTU  
1703211-002A 211550: Prep Comments for EPA200.8, Sample 1703211-002A: 0.00 NTU  
1703211-003A 211551: Prep Comments for EPA200.8, Sample 1703211-003A: 0.04 NTU  
1703211-004A 211552: Prep Comments for EPA200.8, Sample 1703211-004A: 0.10 NTU  
1703211-007A 211555: Prep Comments for EPA200.8, Sample 1703211-007A: 0.01 NTU  
1703211-008A 211559: Prep Comments for EPA200.8, Sample 1703211-008A: 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: 1703211  
Date Reported: 3/21/2017

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln Elementary

**Lab ID:** 1703211-001  
**Client Sample ID:** LE31817-P-CDF-19  
**Collection Date:** 3/18/2017 9:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16538		Analyst: MW
Copper	1,020	0.500		µg/L	1	3/20/2017 4:49:28 PM

**Lab ID:** 1703211-002  
**Client Sample ID:** LE31817-P-OF-21  
**Collection Date:** 3/18/2017 9:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16538		Analyst: MW
Copper	1,090	0.500		µg/L	1	3/20/2017 4:53:29 PM

**Lab ID:** 1703211-003  
**Client Sample ID:** LE31817-P-CDF-32  
**Collection Date:** 3/18/2017 9:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16538		Analyst: MW
Copper	1,070	0.500		µg/L	1	3/20/2017 4:57:30 PM



## Analytical Report

Work Order: 1703211  
Date Reported: 3/21/2017

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln Elementary

**Lab ID:** 1703211-004  
**Client Sample ID:** LE31817-P-CDF-48  
**Collection Date:** 3/18/2017 9:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16538		Analyst: MW
Copper	1,500	0.500		µg/L	1	3/20/2017 5:01:31 PM

**Lab ID:** 1703211-007  
**Client Sample ID:** LE31817-P-WC-53  
**Collection Date:** 3/18/2017 9:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16542		Analyst: TN
Copper	ND	0.500		µg/L	1	3/21/2017 11:28:16 AM

**Lab ID:** 1703211-008  
**Client Sample ID:** LE31817-P-WC-54  
**Collection Date:** 3/18/2017 9:00:00 AM  
**Matrix:** Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b><u>Drinking Water Metals by EPA Method 200.8</u></b>				Batch ID: 16542		Analyst: TN
Copper	1,370	0.500		µg/L	1	3/21/2017 11:44:21 AM



**Work Order:** 1703211  
**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln Ele

## QC SUMMARY REPORT

### Drinking Water Metals by EPA Method 200.8

Sample ID	MB-16542	SampType:	MBLK	Units:	µg/L	Prep Date:	3/20/2017	RunNo:	35065		
Client ID:	MBLKW	Batch ID:	16542			Analysis Date:	3/21/2017	SeqNo:	670309		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	ND	0.500									
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Sample ID	LCS-16542	SampType: LCS			Units: µg/L		Prep Date: 3/20/2017			RunNo: 35065		
Client ID:	LCSW	Batch ID: 16542			Analysis Date: 3/21/2017			SeqNo: 670310				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Copper	105	0.500	100.0	0	105	85	115				
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Sample ID	1703211-007ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	3/20/2017	RunNo:	35065		
Client ID:	LE31817-P-WC-53	Batch ID:	16542			Analysis Date:	3/21/2017	SeqNo:	670312		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	0.689	0.500						0	200	30	
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Sample ID	1703211-007AMS	SampType:	MS	Units:	µg/L	Prep Date:	3/20/2017	RunNo:	35065		
Client ID:	LE31817-P-WC-53	Batch ID:	16542			Analysis Date:	3/21/2017	SeqNo:	670313		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	200	0.500	200.0	0	100	70	130				
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Sample ID	1703211-007AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	3/20/2017	RunNo:	35065		
Client ID:	LE31817-P-WC-53	Batch ID:	16542			Analysis Date:	3/21/2017	SeqNo:	670314		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	213	0.500	200.0	0	106	70	130	200.1	6.16	30	
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**Work Order:** 1703211  
**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Lincoln Ele

## QC SUMMARY REPORT

### Drinking Water Metals by EPA Method 200.8

Sample ID	MB-16538	SampType:	MBLK	Units:	µg/L	Prep Date:	3/20/2017	RunNo:	35047		
Client ID:	MBLKW	Batch ID:	16538			Analysis Date:	3/20/2017	SeqNo:	669901		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	ND	0.500									
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Sample ID	LCS-16538	SampType:	LCS	Units:	µg/L	Prep Date:	3/20/2017	RunNo:	35047		
Client ID:	LCSW	Batch ID:	16538	Analysis Date:				3/20/2017	SeqNo:	669902	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	201	0.500	200.0	0	100	85	115				
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Sample ID	1703147-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	3/20/2017	RunNo:	35047		
Client ID:	BATCH	Batch ID:	16538			Analysis Date:	3/20/2017	SeqNo:	669904		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	8.90	0.500						9.003	1.17	30	
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Sample ID	1703147-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	3/20/2017	RunNo:	35047		
Client ID:	BATCH	Batch ID:	16538			Analysis Date:	3/20/2017	SeqNo:	669905		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	215	0.500	200.0	9.003	103	70	130				
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Sample ID	1703147-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	3/20/2017	RunNo:	35047		
Client ID:	BATCH	Batch ID:	16538			Analysis Date:	3/20/2017	SeqNo:	669906		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	199	0.500	200.0	9.003	95.2	70	130	214.7	7.38	30	
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Client Name: **FE**  
 Logged by: **Erica Silva**

Work Order Number: **1703211**  
 Date Received: **3/20/2017 9:00:00 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 005A - 006A  
 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 °C
Cooler	2.9
Sample	1.9

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



# Fremont

Analytical

3600 Fremont Ave N.  
Seattle, WA 98103

Tel: 206-352-3790  
Fax: 206-352-7178

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:

Project No:

Location:

Report To (PM):

PM Email:

Date: 3/18/2017

Laboratory Project No (Internal):

1703211

Page: 1 of 1

Known: SD Drilling Water - Linda Elementary

Collected by: Amanda Endysk

Ryan Matthews

rmathews@fulcrum.net; cc: aendysk@fulcrum.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 (HCD)	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 (C)***	EDB (8013)	Comments
1 LE31817-P-CDF-19	3/18/2017	0900	DW														HNO <sub>3</sub> preserved
2 LE31817-P-CDF-21																	
3 LE31817-P-CDF-32																	
4 LE31817-P-CDF-48																	
5 LE31817-S-CDF-48																	
6 LE31817-T-CDF-48																	
7 LE31817-S-WC-53																	HNO <sub>3</sub> unpreserved
8 LE31817-P-WC-54																	HNO <sub>3</sub> preserved
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.)

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 3/13/17 1300 Received ☒ Date/Time 3/20/2017 0900

Relinquished ☒ Date/Time 3/13/17 1300 Received ☒ Date/Time 3/20/2017 0900

Relinquished ☒ Date/Time 3/13/17 1300 Received ☒ Date/Time 3/20/2017 0900

TAT: ASAP

Please preserve all unpreserved samples

TAT → SameDay^ NextDay^ 2 Day 3 Day STD

Please coordinate with the lab in advance