

August 31, 2017

Pasco School District No. 1
Attn: Randy D. Nunamaker, Executive Director of Operations
1215 West Lewis Street
Pasco, Washington, 99301

**RE: Winter 2016 Drinking Water Sampling Results
Rosalind Franklin STEM Elementary School, 6010 Road 52, Pasco, Washington**

Dear Randy:

On Thursday, November 10, 2016, Fulcrum Environmental Consulting, Inc. (Fulcrum) collected 47 drinking water samples for lead and copper analysis from Rosalind Franklin STEM Elementary School (School) located at 6010 Road 52 in Pasco, Washington. Initial sampling identified one fixture location with a lead concentration above guidance levels and two fixture locations with copper concentrations above guidance levels. Fulcrum returned to the School to collect samples after remediation of the fixtures and found results 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-135¹. 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 November 10, 2016. Initial results identified one sample with a lead concentration of 43 micrograms per liter (µg/L), above the Environmental Protection Agency (EPA) action level of 15 µg/L, and two samples with copper concentrations above the EPA action level of 1,300 µg/L. Upon receipt of results, Fulcrum and the District consulted with the Benton-Franklin Health District in development of a remedial action plan.

The fixture identified with an elevated lead concentration was replaced and preconditioned by running cold water continuously through the fixture for 24 hours, as specified in WAC 246-366A-130. Following replacement and preconditioning, Fulcrum returned to the School on January 4, 2017 and collected follow-

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

up samples to confirm the success of fixture replacement. Follow-up samples yielded results below the EPA action level, confirming fixture replacement was successful.

Copper is not a significant component in fixtures, but is the primary material in the plumbing system. To remediate elevated copper, the District aggressively flushed the fixtures with cold water to clear the plumbing of copper construction debris. Fulcrum returned on January 4 and April 6, 2017 and collected samples to evaluate the success of the remediation. Follow-up samples found copper concentrations below the EPA action level, confirming the remediation was successful. Following sampling and review of laboratory results, Benton-Franklin Health District supported Fulcrum's recommendation and the District's request to return the fixtures 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 November 2021). Additionally, if WAC 246-366A-130 is enacted, the regulations would require testing of all remaining fixtures within two years of the effective date (July 1, 2017). See Figure 1 in Attachment A for fixture locations and laboratory results.

Sampling Methodology

As a portion of this project, Fulcrum prepared a Sampling and Analysis Plan (SAP) in consultation with the Benton-Franklin Health District 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 on 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 locations and plumbing system in question. First draw samples were collected into 250 mL polyethylene bottles preserved with nitric acid. The second draw water volume consists of water collected into a 250 mL unpreserved polyethylene container immediately following the first draw. No water was lost between collection of the first and second draw samples. The third draw water volume is a 1,000 mL sample collected into a one liter unpreserved polyethylene container after the fixture has been flushed for about three to five minutes.

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

Analytical Results

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

Initial Sampling

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

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

Remedial Sampling

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

Discussion

Initial Sampling

Analytical results identified one sample with a lead concentration above the EPA action level of 15 µg/L, located on the east island in the kitchen, and two samples with copper concentrations above the EPA action level of 1,300 µg/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 lead concentrations, the District replaced the identified fixture. No fixtures of the same style were identified in the building. Fulcrum returned on January 4, 2017 following fixture replacement and preconditioning to collect follow-up samples from the initially identified fixture.

To remediate elevated copper concentrations, the District completed an aggressive flush of the identified fixtures. Fulcrum returned on the morning following the aggressive flush, January 4 and April 6, 2017, to collect follow-up samples from the fixtures.

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

Recommendations

One initial sample contained lead above the EPA action level of 15 µg/L and two initial samples contained copper above the EPA action level of 1,300 µg/L. The District replaced the identified fixture with elevated lead and preconditioned the fixture for 24 hours as specified in WAC 246-366A-130. The District completed an aggressive flush of the fixtures identified with elevated copper. Follow-up sampling demonstrated that all lead and copper concentrations were below action levels. Following remedial sampling and review of laboratory results, Benton-Franklin Health District supported Fulcrum's recommendation and the District's request to return the fixtures 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 the next five years (before November 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



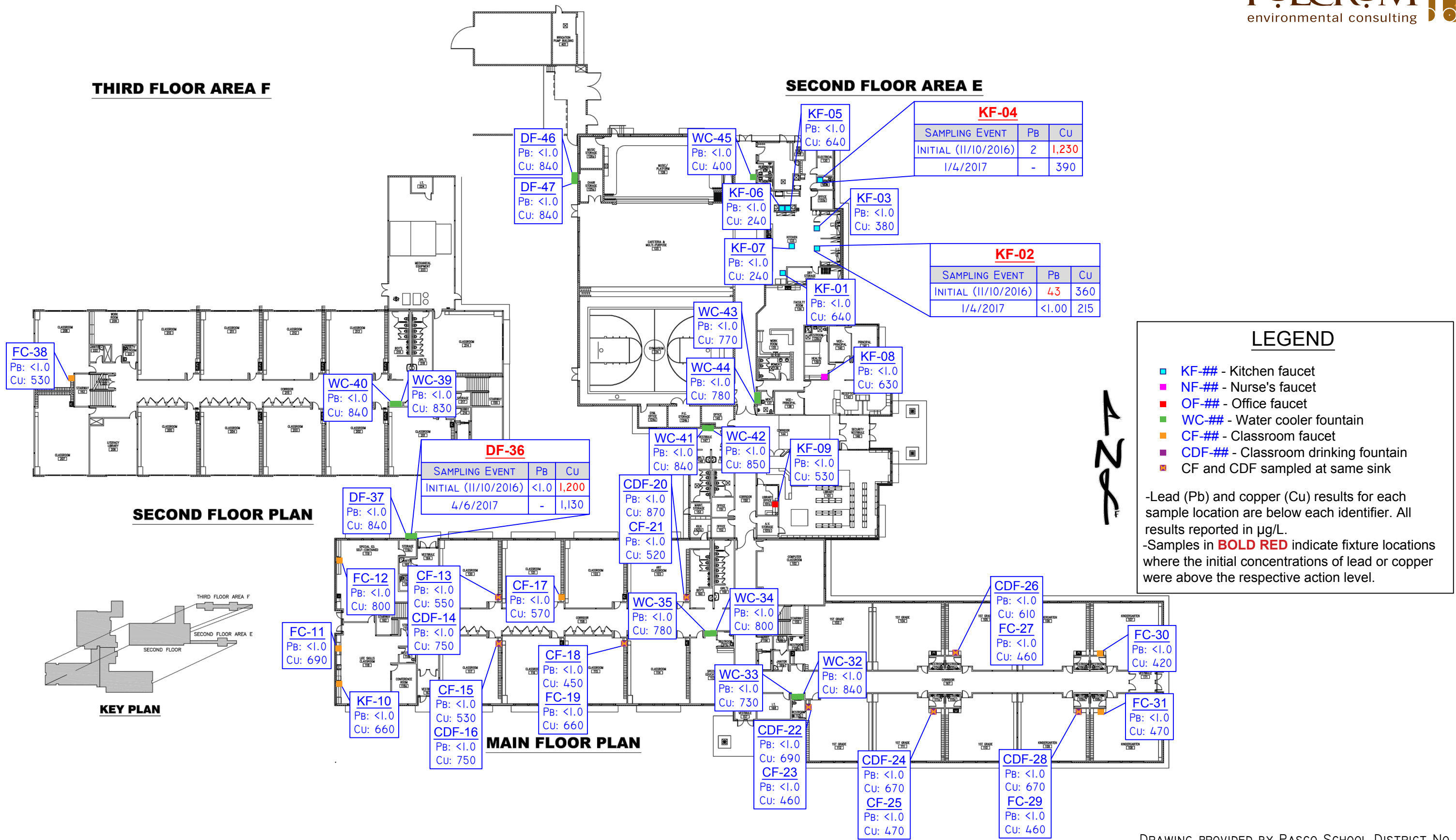
Ryan K. Mathews, CIH, CHMM
Principal



ATTACHMENT A

Figure 1: Sample Location Map





DRAWING PROVIDED BY PASCO SCHOOL DISTRICT NO. 1

ATTACHMENT B

Site-Specific Sampling and Analysis Plan



Site-Specific Sampling and Analysis Plan

Pasco School District No. 1 – 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: Rosalind Franklin STEM Elementary School Address: 6010 Road 52, Pasco, WA 99301

☒ Elementary ☐ Middle School ☐ High School ☐ Administration

Date of Construction: 2014 Modernizations: N/A

Fixture Type	Fixture Locations	Fixture Styles ¹	Samples Collected	Ratio
Drinking fountain/water cooler (DF/WC)	15	2	15	100%
Kitchen Fixture (KF)	7	5	7	100%
Classroom faucet, including faucets in Food Labs and Life Sciences Classrooms (CF)	35	3	15	43%
Classroom drinking fountain at sink (CDF)	24	2	8	33%
Nurse's Office/Health Room (NF)	1	1	1	100%
Teacher's Lounges/Work Rooms (OF)	3	1	1	33%
TOTALS	84		47	56%

¹ Fixture styles are approximate based on sampler's observations

Lead Sampler: Kyle Ames Date: 11/10/2016

Sample Prefix: FRA - - 111016 - 01 to 49
School Code Fixture Type Date Sample Number

Laboratory: R. J. Lee Group, Columbia Basin Analytical Delivery Date: November 10, 2016

Comments:

- All initial samples were first draw (P) samples
- "FC" fixture type in analytical results indicates "free choice"; fixture type was classified after sampling
- 6 portable classrooms; unknown if dry or contain fixtures

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

Sample Identification and Location	Fixture Type	Lead Results (µg/L)	Copper Results (µg/L)
FRA-KF-111016-01: Kitchen, wall opposite south entrance	Kitchen Faucet	<1.0	640
FRA-KF-111016-02: Kitchen, east island, left fixture (south)	Kitchen Faucet	43	360
FRA-KF-111016-03: Kitchen, east island, right fixture (north)	Kitchen Faucet	<1.0	380
FRA-KF-111016-04: Kitchen, north bathroom	Kitchen Faucet	2	1,230
FRA-KF-111016-05: Kitchen, north island, left fixture	Kitchen Faucet	<1.0	640
FRA-KF-111016-06: Kitchen, north island, right fixture	Kitchen Faucet	<1.0	240
FRA-KF-111016-07: Kitchen, center vat fill	Kitchen Faucet	<1.0	240
FRA-KF-111016-08: Health Room	Nurse's Faucet	<1.0	630
FRA-KF-111016-09: Library Workroom	Office Faucet	<1.0	530
FRA-KF-111016-10: South fixture in Classroom 118	Classroom Faucet	<1.0	660
FRA-FC-111016-11: North fixture in Classroom 118	Classroom Faucet	<1.0	690
FRA-FC-111016-12: North fixture in Classroom 119	Classroom Faucet	<1.0	800
FRA-CF-111016-13: Classroom 120	Classroom Drinking Fountain	<1.0	550
FRA-CDF-111016-14: Classroom 120	Classroom Faucet	<1.0	750
FRA-CF-111016-15: Classroom 117	Classroom Faucet	<1.0	530
FRA-CDF-111016-16: Classroom 117	Classroom Drinking Fountain	<1.0	750
FRA-CF-111016-17: Classroom 121	Classroom Faucet	<1.0	570
FRA-CF-111016-18: Classroom 115	Classroom Faucet	<1.0	450
FRA-FC-111016-19: Classroom 115	Classroom Drinking Fountain	<1.0	660
FRA-CDF-111016-20: Classroom 123	Classroom Drinking Fountain	<1.0	870
FRA-CF-111016-21: Classroom 123	Classroom Faucet	<1.0	520
FRA-CDF-111016-22: Classroom 112	Classroom Drinking Fountain	<1.0	690
FRA-CF-111016-23: Classroom 112	Classroom Faucet	<1.0	460
FRA-CDF-111016-24: Classroom 111	Classroom Drinking Fountain	<1.0	670
FRA-CF-111016-25: Classroom 111	Classroom Faucet	<1.0	470
FRA-CDF-111016-26: Classroom 105	Classroom Drinking Fountain	<1.0	610
FRA-FC-111016-27: Classroom 105	Classroom Faucet	<1.0	460
FRA-CDF-111016-28: Classroom 109	Classroom Drinking Fountain	<1.0	670
FRA-FC-111016-29: Classroom 109	Classroom Faucet	<1.0	460
FRA-FC-111016-30: Classroom 107	Classroom Faucet	<1.0	420
FRA-FC-111016-31: Classroom 108	Classroom Faucet	<1.0	470
FRA-WC-111016-32: Hallway opposite Classroom 103, left fixture	Water Cooler Fountain	<1.0	840
FRA-WC-111016-33: Hallway opposite Classroom 103, right fixture	Water Cooler Fountain	<1.0	730
FRA-WC-111016-34: Hallway adjacent Classroom 113, left fixture	Water Cooler Fountain	<1.0	800
FRA-WC-111016-35: Hallway adjacent Classroom 113, right fixture	Water Cooler Fountain	<1.0	780
FRA-DF-111016-36: Exterior, north wall of SW hallway, left fixture	Drinking Fountain	<1.0	1,200
FRA-DF-111016-37: Exterior, north wall of SW hallway, right fixture	Drinking Fountain	<1.0	840
FRA-FC-111016-38: 2nd floor, Classroom 208	Classroom Faucet	<1.0	530
FRA-WC-111016-39: 2nd floor hallway, left fixture adjacent Classroom 202	Water Cooler Fountain	<1.0	830
FRA-WC-111016-40: 2nd floor hallway, right fixture adjacent Classroom 202	Water Cooler Fountain	<1.0	840
FRA-WC-111016-41: Vestibule west of main entrance, left fixture	Water Cooler Fountain	<1.0	840
FRA-WC-111016-42: Vestibule west of main entrance, right fixture	Water Cooler Fountain	<1.0	850
FRA-WC-111016-43: Hallway opposite gymnasium entrance, left fixture	Water Cooler Fountain	<1.0	770

Sample Identification and Location	Fixture Type	Lead Results (µg/L)	Copper Results (µg/L)
FRA-WC-111016-44: Hallway opposite gymnasium entrance, right fixture	Water Cooler Fountain	<1.0	780
FRA-WC-111016-45: North hallway opposite Music Room	Water Cooler Fountain	<1.0	400
FRA-DF-111016-46: Exterior northwest, left fixture north of Cafeteria exit	Drinking Fountain	<1.0	840
FRA-DF-111016-47: Exterior northwest, right fixture north of Cafeteria exit	Drinking Fountain	<1.0	840
FRA-FC-111016-48: Laboratory blank - labeled "Free choice"	Distilled Water Blank	<1.0	<10
FRA-FC-111016-49: Laboratory spike - labeled "Free choice"	Lead and Copper Spike	13	1,200
EPA Action Level		15	1,300

- 1 µg/L means microgram per liter or parts per billion (ppb).
- 2 Action levels based on the U.S. EPA's Lead and Copper Rule.
Results in **bold** indicate concentrations above the action levels of 15 µg/L for lead and 1,300 µg/L for copper
Results in *italics* are quality assurance spike and blank samples

Table 2: pH and Temperature Data Summary

Sample Number and Location	Fixture Type	pH Flush	pH Sample	Temperature Flush (°C)	Temperature Sample (°C)
FRA-KF-111016-04: Kitchen, north bathroom	Kitchen Faucet	8.35	8.15	18.6	17.9
FRA-KF-111016-08: Health Room	Nurse's Faucet	8.27	8.06	19.6	21.2
FRA-FC-111016-12: North fixture in Classroom 119	Classroom Faucet	8.19	8.06	21.1	18.8
FRA-CDF-111016-16: Classroom 117	Classroom Drinking Fountain	8.22	7.84	20.9	21.6
FRA-CDF-111016-20: Classroom 123	Classroom Drinking Fountain	8.1	7.92	20.4	20.7
FRA-CDF-111016-24: Classroom 111	Classroom Drinking Fountain	8.1	7.82	21.3	20.4
FRA-CDF-111016-28: Classroom 109	Classroom Drinking Fountain	8.08	7.74	21	20.7
FRA-WC-111016-32: SW hallway, left fixture opposite restrooms	Water Cooler Fountain	8.05	7.77	15.1	16
FRA-DF-111016-36: Exterior, north wall of SW hallway, left fixture	Drinking Fountain	7.98	7.94	19.2	14
FRA-WC-111016-40: 2nd floor hallway east, right fixture opposite restrooms	Water Cooler Fountain	8.16	7.96	13.9	12.9
FRA-WC-111016-44: Hallway opposite gymnasium entrance, right fixture	Water Cooler Fountain	8.14	8.05	16	16.1

Table 3: Remedial Sampling Analytical Results Summary

Sampling Event	Sample Identification				
	KF-02	KF-04	DF-36	FC-48	FC-49
Lead Results					
Initial (11/10/2016)	43	2	<1.0	<1.0	13
1/4/2017	<1.00	-	-	<1.00	14.2
EPA Action Level	15	15	15	15	15
Copper Results					
Initial (11/10/2016)	360	1,230	1,200	<10	1,200

Sampling Event	Sample Identification				
	KE-02	KE-04	DF-36	FC-48	FC-49
Copper Results					
1/4/2017	215	390	-	<0.5	1,370
4/6/2017	-	-	1,130	0.537	1,280
EPA Action Level	1,300	1,300	1,300	1,300	1,300

- Results reported in micrograms per liter (µg/L) or parts per billion (ppb).
- 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
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 49 sample(s) on 11/10/16 for analysis. These sample(s) have been assigned a login order number of W611043. 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.

-Revision is due to missing qualifiers in the summary page. The dilution factor for sample W611043-49 (copper) was corrected along with the final result which is reflected in the summary page. Samples analyzed on November 17th, 2016 were digested due to high turbidity and the remaining samples were analyzed on November 28th, 2016.

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".

01/12/17

Project Coordinator II, M. Fernanda Pincheira

Date

If you have any questions please feel free to contact Fernanda Pincheira at 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: 12/29/16 13:59
Report Time Stamp: 01/12/17 11:58



Laboratory Report

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

Client Project:

No Project

RJ Lee Group No.: W611043
COC No.:
Samples Received: 11/10/16
Analysis/Prep Date: 11/28/16
Report Date: 01/12/17

Sample Name:	FRA-KF-111016-01	Matrix:	Potable Water	Date Received:	11/10/16
RJ Lee Grp. ID:	W611043-01			Date Analyzed:	11/28/16
Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers	
Copper	EPA 200.8	0.64	0.01		
Lead	EPA 200.8	< 0.001	0.001		

Sample Name:	FRA-KF-111016-02	Matrix:	Potable Water	Date Received:	11/10/16
RJ Lee Grp. ID:	W611043-02			Date Analyzed:	11/28/16
Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers	
Copper	EPA 200.8	0.36	0.01		
Lead	EPA 200.8	0.043	0.001		

Sample Name:	FRA-KF-111016-03	Matrix:	Potable Water	Date Received:	11/10/16
RJ Lee Grp. ID:	W611043-03			Date Analyzed:	11/17/16
Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers	
Copper	EPA 200.8	0.38	0.01		
Lead	EPA 200.8	< 0.001	0.001		

Sample Name:	FRA-KF-111016-04	Matrix:	Potable Water	Date Received:	11/10/16
RJ Lee Grp. ID:	W611043-04			Date Analyzed:	11/17/16
Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers	
Copper	EPA 200.8	1.23	0.01		
Lead	EPA 200.8	0.002	0.001		

Sample Name:	FRA-KF-111016-05	Matrix:	Potable Water	Date Received:	11/10/16
RJ Lee Grp. ID:	W611043-05			Date Analyzed:	11/17/16
Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers	
Copper	EPA 200.8	0.64	0.01		
Lead	EPA 200.8	< 0.001	0.001		

Columbia Basin Analytical Laboratories | 2710 North 20th Avenue, Pasco WA 93301 | 509.545.4989

WWW.RJLEEGROUP.COM

Report Template: GenMetalReportFull_v12.rpt

Approved: 12/29/16 13:59
Report Time Stamp: 01/12/17 11:58



Sample Name: FRA-KF-111016-06
RJ Lee Grp. ID: W611043-06

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.24	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-KF-111016-07
RJ Lee Grp. ID: W611043-07

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.24	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-KF-111016-08
RJ Lee Grp. ID: W611043-08

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.63	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-KF-111016-09
RJ Lee Grp. ID: W611043-09

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.53	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-KF-111016-10
RJ Lee Grp. ID: W611043-10

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.66	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-FC-111016-11
RJ Lee Grp. ID: W611043-11

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

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

**Sample Name:** FRA-FC-111016-12**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-12**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.80	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-CF-111016-13**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-13**Date Analyzed:** 11/28/16

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

Sample Name: FRA-CDF-111016-14**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-14**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.75	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-CF-111016-15**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-15**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.53	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-CDF-111016-16**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-16**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.75	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-CF-111016-17**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-17**Date Analyzed:** 11/28/16

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



Sample Name: FRA-CF-111016-18
RJ Lee Grp. ID: W611043-18

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.45	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-FC-111016-19
RJ Lee Grp. ID: W611043-19

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.66	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-CDF-111016-20
RJ Lee Grp. ID: W611043-20

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.87	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-CF-111016-21
RJ Lee Grp. ID: W611043-21

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.52	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-CDF-111016-22
RJ Lee Grp. ID: W611043-22

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

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

Sample Name: FRA-CF-111016-23
RJ Lee Grp. ID: W611043-23

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.46	0.01	
Lead	EPA 200.8	< 0.001	0.001	

**Sample Name:** FRA-CDF-111016-24**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-24**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.67	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-CF-111016-25**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-25**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.47	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-CDF-111016-26**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-26**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.61	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-FC-111016-27**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-27**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.46	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-CDF-111016-28**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-28**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.67	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-FC-111016-29**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-29**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.46	0.01	
Lead	EPA 200.8	< 0.001	0.001	



Sample Name: FRA-FC-111016-30
RJ Lee Grp. ID: W611043-30

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.42	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-FC-111016-31
RJ Lee Grp. ID: W611043-31

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.47	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-WC-111016-32
RJ Lee Grp. ID: W611043-32

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

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

Sample Name: FRA-WC-111016-33
RJ Lee Grp. ID: W611043-33

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

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: FRA-WC-111016-34
RJ Lee Grp. ID: W611043-34

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.80	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-WC-111016-35
RJ Lee Grp. ID: W611043-35

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

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



Sample Name: FRA-DF-111016-36
RJ Lee Grp. ID: W611043-36

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

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: FRA-DF-111016-37
RJ Lee Grp. ID: W611043-37

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

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

Sample Name: FRA-FC-111016-38
RJ Lee Grp. ID: W611043-38

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.53	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-WC-111016-39
RJ Lee Grp. ID: W611043-39

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

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

Sample Name: FRA-WC-111016-40
RJ Lee Grp. ID: W611043-40

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

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

Sample Name: FRA-WC-111016-41
RJ Lee Grp. ID: W611043-41

Matrix: Potable Water

Date Received: 11/10/16
Date Analyzed: 11/28/16

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

**Sample Name:** FRA-WC-111016-42**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-42**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.85	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-WC-111016-43**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-43**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.77	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-WC-111016-44**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-44**Date Analyzed:** 11/28/16

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

Sample Name: FRA-WC-111016-45**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-45**Date Analyzed:** 11/28/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.40	0.01	
Lead	EPA 200.8	< 0.001	0.001	

Sample Name: FRA-DF-111016-46**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-46**Date Analyzed:** 11/17/16

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

Sample Name: FRA-DF-111016-47**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-47**Date Analyzed:** 11/17/16

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

**Sample Name:** FRA-FC-111016-48**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-48**Date Analyzed:** 11/28/16

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: FRA-FC-111016-49**Matrix:** Potable Water**Date Received:** 11/10/16**RJ Lee Grp. ID:** W611043-49**Date Analyzed:** 11/17/16

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.2	0.1	X
Lead	EPA 200.8	0.013	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*
Scientist III J Grissmerson

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Report Template: GenMetalReportFull_v12.rpt

Approved: 12/29/16 13:59
Report Time Stamp: 01/12/17 11:58

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Plan Mathews

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R4 12032015

Request for Environmental and IH Laboratory Analytical Services

W611043

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ATTENTION TO:		Project No.: Ryan Matthews		Client Job No.: 16199401	
Lab Use Only		Project No.:		Client Job No.:	
Date Logged In:		Logged In By:		Standard: Yes No If No, No. of Business Days:	
Name: Amanda Embysk, Ryan Matthews		Company: Fulcrum Environmental Consulting		Sample Purpose: Information X Regulatory Accreditation (please list below):	
Address: 406 North 2nd Street		City, State, Zip: Yakima, WA, 98901		System ID #:	
Phone: (509) 574-0839		Fax: (509) 575-8453		DOH Source #:	
Call with Verbal Results:		Email Results To: aembysk@fulcrum.net, cc: rmatthews@fulcrum.net		Multiple Sources #s:	
Fax Results To:		Name: Lorrie Boutillier		Sample Purpose: A B Other	
Company: Fulcrum Environmental		Email: lboutillier@fulcrum.net		Matrix: WW=Wastewater GW=Groundwater S=Soil/Sludge E=Extract	
Address: 406 N 2nd Street		City, State, Zip: Yakima, WA, 98901		SW=Surface Water DW=Drinking Water O=Oil X=Other	
Phone: (509) 574-0839		Fax: (509) 575-8453		Container: P=Plastic G=Glass W=Wipe A=Air (filter or tube)	
Send Invoice To		Analysis Requested		Pres. Upon Receipt (Y/N)	
Special Instructions		EPA 200.8: Pb, Cu		Preservation	
Client Sample ID		Sample Description		Matrix	
Sample Date		Sample Time		Container Type	
Start		Stop		pH	
Wipe Area / Air Volume		No. Containers			
FRA-FC-111016-12		class fine choice		11-10-16	
FRA-CF-111016-13		class fine choice		11-10-16	
FRA-CD-111016-14		class fine choice		11-10-16	
FRA-CF-111016-15		class fine choice		11-10-16	
FRA-CD-111016-16		class fine choice		11-10-16	
FRA-CF-111016-17		class fine choice		11-10-16	
FRA-CD-111016-18		class fine choice		11-10-16	
FRA-FC-111016-19		class fine choice		11-10-16	
FRA-CD-111016-20		class fine choice		11-10-16	
FRA-CF-111016-21		class fine choice		11-10-16	
FRA-CD-111016-22		class fine choice		11-10-16	
Chain of Custody		Relinquished By (Signature):		Date: 11-10-16 Time: 1400	
Relinquished By (Print Name):		Relinquished To:		Method of Shipment:	
Company Name:		Fulcrum			
Chain of Custody		Relinquished By (Signature):		Date: 11-10-16 Time: 1400	
Relinquished By (Print Name):		Relinquished To:		Method of Shipment:	
Company Name:		Fulcrum			
Chain of Custody		Relinquished By (Signature):		Date: 11-10-16 Time: 1400	
Relinquished By (Print Name):		Relinquished To:		Method of Shipment:	
Company Name:		Fulcrum			



RJ LEE GROUP
DELIVERING SCIENTIFIC RESOLUTION

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Request for Environmental and IH Laboratory Analytical Services

W611043

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ATTENTION TO:		Project No.: <u>16149401</u>		Client Job No.: <u>16149401</u>	
Lab Use Only		Project No.: <u>16149401</u>		Client Job No.: <u>16149401</u>	
Name: Amanda Embysk, Ryan Mathews		Company: Fulcrum Environmental Consulting		City, State, Zip: Yakima, WA, 98901	
Phone: (509) 574-0839		Fax: (509) 575-8453		Call with Verbal Results: aembysk@fulcrum.net, cc: rmathews@fulcrum.net	
Email Results To: aembysk@fulcrum.net, cc: rmathews@fulcrum.net		Fax Results To:		Name: Lorie Boutilier	
Company: Fulcrum Environmental		Email: lboutilier@fulcrum.net		Address: 406 N 2nd Street	
City, State, Zip: Yakima, WA, 98901		Phone: (509) 574-0839		Fax: (509) 575-8453	
Send Invoice To		City, State, Zip: Yakima, WA, 98901		Phone: (509) 574-0839	
Special Instructions		Sample Description		Sample Date	
Client Sample ID		Sample Description		Sample Date	
FRA-CF-111016-23		class drink faucet		11-16-16	
FRA-CDF-111016-24		class drink faucet			
FRA-CF-111016-25		class room 111			
FRA-CDF-111016-26		class room 105			
FRA-FC-111016-27		class room 105			
FRA-CDF-111016-28		class room 109			
FRA-FC-111016-29		class room 109			
FRA-FC-111016-30		class room 109			
FRA-FC-111016-31		class room 108			
FRA-WC-111016-32		hallway water cooler			
FRA-WC-111016-33		hallway water cooler			
Chain of Custody		Relinquished By (Signature): <u>[Signature]</u>		Date: <u>11-16-16</u> Time: <u>1400</u>	
Relinquished By (Print Name): <u>Kyle Aves</u>		Relinquished To:		Method of Shipment:	
Company Name: <u>Fulcrum</u>		Date:		Time:	
Relinquished By (Signature):		Relinquished To:		Method of Shipment:	
Relinquished By (Print Name):		Date:		Time:	
Company Name:		Relinquished To:		Method of Shipment:	
Chain of Custody		Relinquished By (Signature):		Date: <u>11/16/16</u> Time: <u>2:10</u>	
Relinquished By (Print Name):		Relinquished To:		Method of Shipment:	
Company Name:		Date:		Time:	
Relinquished By (Signature):		Relinquished To:		Method of Shipment:	
Relinquished By (Print Name):		Date:		Time:	
Company Name:		Relinquished To:		Method of Shipment:	



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Request for Environmental and IH Laboratory Analytical Services

W611043

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ATTENTION TO: <u>Ryan Matthews</u>				Purchase Order No.:				Client Job No.: <u>161899.01</u>			
Lab Use Only				Turnaround Request				Standard: <u>Yes</u> <u>No</u> <u>If 'No', No. of Business Days:</u>			
Project No.:				Date Logged In:				System ID #:			
Client No.:				Logged In By:				Sample Purpose: <u>Information X</u> <u>Regulatory</u> <u>Accreditation (please list below):</u>			
Report Results To				Drinking Water Sample Only				DOH Source #:			
Name: Amanda Embysk, Ryan Matthews				Company: Fulcrum Environmental Consulting				Multiple Sources #s:			
Address: 406 North 2nd Street				City, State, Zip: Yakima, WA, 98901				Preservation: <u>A</u> <u>B</u> <u>Other</u> <u>Matrix:</u>			
Phone: (509) 574-0839				Fax: (509) 575-8453				Unpres: <u>H₂SO₄</u> <u>WW=Wastewater</u> <u>P=Plastic</u>			
Call with Verbal Results:				Email Results To: aembysk@fulcrum.net, cc: rmatthews@fulcrum.net				4°C: <u>HCl</u> <u>GW=Groundwater</u> <u>G=Glass</u>			
Fax Results To:				Name: Lorrie Boutilier				HNO₃: <u>NaOH</u> <u>S=Soil/Sludge</u> <u>W=Wipe</u>			
Send Invoice To				Company: Fulcrum Environmental				E=Extract <u>SW=Surface Water</u> <u>A=Air (filter or tube)</u>			
Address: 406 N 2nd Street				City, State, Zip: Yakima, WA, 98901				O=Oil <u>X=Other</u> <u>DW=Drinking Water</u>			
Phone: (509) 574-0839				Fax: (509) 575-8453				Pres. Upon Receipt (Y/N)			
Special Instructions				Analysis Requested				Matrix			
Client Sample ID				Sample Description				Container Type			
Sample Date				Start				pH			
Stop				Wipe Area / Air Volume				No. Containers			
FRA-10C-111016-45				Hallway under (CGLR) exterior music platform				IMP DR P			
FRA-10F-111016-46				Exterior drive in 12 ft				IMP DR P			
FRA-10F-111016-47				Exterior drive in 12 ft				IMP DR P			
FRA-FC-111016-48				Free choice				IMP DR P			
FRA-FC-111016-49				Free choice				IMP DR P			
Chain of Custody				Relinquished By (Signature): <u>[Signature]</u>				Date: <u>11-10-16</u> Time: <u>1400</u>			
Relinquished By (Print Name): <u>Ryan Matthews</u>				Relinquished To:				Received By (Signature): <u>[Signature]</u>			
Company Name: <u>Fulcrum</u>				Method of Shipment:				Received By (Print Name): <u>[Signature]</u>			
Chain of Custody				Relinquished By (Signature):				Date:			
Relinquished By (Print Name):				Relinquished To:				Received By (Print Name):			
Company Name:				Method of Shipment:				Received By (Signature):			

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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: Pasco SD Drinking Water - Franklin Elementary Additional Sampl
Work Order Number: 1701028

January 05, 2017

Attention Ryan Mathews:

Fremont Analytical, Inc. received 8 sample(s) on 1/5/2017 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

CC:
Amanda Enbysk

CLIENT: Fulcrum Environmental
Project: Pasco SD Drinking Water - Franklin Elemen
Work Order: 1701028

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1701028-001	FRA1417-KF-P-02	01/04/2017 9:00 AM	01/05/2017 9:13 AM
1701028-002	FRA1417-KF-S-02	01/04/2017 9:00 AM	01/05/2017 9:13 AM
1701028-003	FRA1417-KF-T-02	01/04/2017 9:00 AM	01/05/2017 9:13 AM
1701028-004	FRA1417-KF-P-04	01/04/2017 9:00 AM	01/05/2017 9:13 AM
1701028-005	FRA1417-KF-S-04	01/04/2017 9:00 AM	01/05/2017 9:13 AM
1701028-006	FRA1417-KF-T-04	01/04/2017 9:00 AM	01/05/2017 9:13 AM
1701028-007	FRA1417-FC-P-48	01/04/2017 9:00 AM	01/05/2017 9:13 AM
1701028-008	FRA1417-FC-P-49	01/04/2017 9:00 AM	01/05/2017 9:13 AM

CLIENT: Fulcrum Environmental
Project: Pasco SD Drinking Water - Franklin Elementary Additional 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:

1701028-001A 199969: Prep Comments for EPA200.8, Sample 1701028-001A: Turbidity: 0.11 NTU
1701028-002A 199970: Prep Comments for EPA200.8, Sample 1701028-002A: Turbidity: 0.10 NTU
1701028-003A 199971: Prep Comments for EPA200.8, Sample 1701028-003A: Turbidity: 0.12 NTU
1701028-004A 199972: Prep Comments for EPA200.8, Sample 1701028-004A: Turbidity: 0.25 NTU
1701028-005A 199973: Prep Comments for EPA200.8, Sample 1701028-005A: Turbidity: 0.30 NTU
1701028-006A 199974: Prep Comments for EPA200.8, Sample 1701028-006A: Turbidity: 0.21 NTU
1701028-007A 199975: Prep Comments for EPA200.8, Sample 1701028-007A: Turbidity: 0.14 NTU
1701028-008A 199976: Prep Comments for EPA200.8, Sample 1701028-008A: Turbidity: 0.20 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: 1701028
Date Reported: 1/5/2017

CLIENT: Fulcrum Environmental

Project: Pasco SD Drinking Water - Franklin Elementary Additional Sampling

Lab ID: 1701028-001

Client Sample ID: FRA1417-KF-P-02

Collection Date: 1/4/2017 9:00:00 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: 15847

Analyst: TN

Copper	215	0.500		µg/L	1	1/5/2017 12:45:59 PM
Lead	ND	1.00		µg/L	1	1/5/2017 12:45:59 PM

Lab ID: 1701028-002

Client Sample ID: FRA1417-KF-S-02

Collection Date: 1/4/2017 9:00:00 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: 15847

Analyst: TN

Copper	313	0.500		µg/L	1	1/5/2017 12:49:35 PM
Lead	ND	1.00		µg/L	1	1/5/2017 12:49:35 PM

Lab ID: 1701028-003

Client Sample ID: FRA1417-KF-T-02

Collection Date: 1/4/2017 9:00:00 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: 15847

Analyst: TN

Copper	202	0.500		µg/L	1	1/5/2017 12:53:10 PM
Lead	ND	1.00		µg/L	1	1/5/2017 12:53:10 PM



Analytical Report

Work Order: 1701028
Date Reported: 1/5/2017

CLIENT: Fulcrum Environmental

Project: Pasco SD Drinking Water - Franklin Elementary Additional Sampling

Lab ID: 1701028-004

Client Sample ID: FRA1417-KF-P-04

Collection Date: 1/4/2017 9:00:00 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: 15847

Analyst: TN

Copper	390	0.500		µg/L	1	1/5/2017 12:56:46 PM
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Lab ID: 1701028-007

Client Sample ID: FRA1417-FC-P-48

Collection Date: 1/4/2017 9:00:00 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: 15848

Analyst: TN

Copper	ND	0.500		µg/L	1	1/5/2017 2:12:50 PM
Lead	ND	1.00		µg/L	1	1/5/2017 2:12:50 PM

Lab ID: 1701028-008

Client Sample ID: FRA1417-FC-P-49

Collection Date: 1/4/2017 9:00:00 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: 15848

Analyst: TN

Copper	1,370	0.500		µg/L	1	1/5/2017 2:16:26 PM
Lead	14.2	1.00		µg/L	1	1/5/2017 2:16:26 PM



Work Order: 1701028
CLIENT: Fulcrum Environmental
Project: Pasco SD Drinking Water - Franklin Elemen

QC SUMMARY REPORT

Drinking Water Metals by EPA Method 200.8

Sample ID	MB-15848	SampType:	MBLK		Units:	µg/L		Prep Date:	1/5/2017		RunNo:	33740	
Client ID:	MBLKW	Batch ID:	15848					Analysis Date:	1/5/2017		SeqNo:	640617	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		ND	0.500										
Lead		ND	1.00										

Sample ID	LCS-15848	SampType:	LCS		Units:	µg/L		Prep Date:	1/5/2017		RunNo:	33740	
Client ID:	LCSW	Batch ID:	15848					Analysis Date:	1/5/2017		SeqNo:	640618	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		102	0.500	100.0	0	102	85	115					
Lead		48.6	1.00	50.00	0	97.2	85	115					

Sample ID	1612269-073ADUP	SampType:	DUP		Units:	µg/L		Prep Date:	1/5/2017		RunNo:	33740	
Client ID:	BATCH	Batch ID:	15848					Analysis Date:	1/5/2017		SeqNo:	640622	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		97.8	0.500						100.7		2.97	30	
Lead		ND	1.00						1.063		8.18	30	

Sample ID	1612269-073AMS	SampType:	MS		Units:	µg/L		Prep Date:	1/5/2017		RunNo:	33740	
Client ID:	BATCH	Batch ID:	15848					Analysis Date:	1/5/2017		SeqNo:	640623	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		301	0.500	200.0	100.7	100	70	130					
Lead		93.3	1.00	100.0	1.063	92.2	70	130					

Sample ID	1612269-073AMSD	SampType:	MSD		Units:	µg/L		Prep Date:	1/5/2017		RunNo:	33740	
Client ID:	BATCH	Batch ID:	15848					Analysis Date:	1/5/2017		SeqNo:	640624	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Copper		312	0.500	200.0	100.7	106	70	130	300.7		3.80	30	



Work Order: 1701028
CLIENT: Fulcrum Environmental
Project: Pasco SD Drinking Water - Franklin Elemen

QC SUMMARY REPORT

Drinking Water Metals by EPA Method 200.8

Sample ID	1612269-073AMSD			SampType:	MSD		Units:	µg/L		Prep Date:	1/5/2017		RunNo:	33740	
Client ID:	BATCH			Batch ID:	15848					Analysis Date:	1/5/2017		SeqNo:	640624	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual				
Lead	98.0	1.00	100.0	1.063	96.9	70	130	93.26	4.91	30					



Work Order: 1701028
CLIENT: Fulcrum Environmental
Project: Pasco SD Drinking Water - Franklin Elemen

QC SUMMARY REPORT

Drinking Water Metals by EPA Method 200.8

Sample ID MB-15847	SampType: MBLK	Units: µg/L		Prep Date: 1/5/2017	RunNo: 33739
Client ID: MBLKW	Batch ID: 15847	Analysis Date: 1/5/2017		SeqNo: 640569	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Copper	ND	0.500			
Lead	ND	1.00			

Sample ID LCS-15847	SampType: LCS	Units: µg/L		Prep Date: 1/5/2017	RunNo: 33739
Client ID: LCSW	Batch ID: 15847	Analysis Date: 1/5/2017		SeqNo: 640570	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Copper	102	0.500	100.0	0	102 85 115
Lead	49.0	1.00	50.00	0	97.9 85 115

Sample ID 1701027-001ADUP	SampType: DUP	Units: µg/L		Prep Date: 1/5/2017	RunNo: 33739
Client ID: BATCH	Batch ID: 15847	Analysis Date: 1/5/2017		SeqNo: 640572	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Copper	439	0.500			459.1 4.56 30
Lead	28.6	1.00			29.36 2.48 30

Sample ID 1701027-001AMS	SampType: MS	Units: µg/L		Prep Date: 1/5/2017	RunNo: 33739
Client ID: BATCH	Batch ID: 15847	Analysis Date: 1/5/2017		SeqNo: 640573	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Copper	638	0.500	200.0	459.1	89.4 70 130
Lead	124	1.00	100.0	29.36	94.7 70 130

Sample ID 1701027-001AMSD	SampType: MSD	Units: µg/L		Prep Date: 1/5/2017	RunNo: 33739
Client ID: BATCH	Batch ID: 15847	Analysis Date: 1/5/2017		SeqNo: 640574	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Copper	628	0.500	200.0	459.1	84.7 70 130 637.9 1.50 30



Work Order: 1701028
CLIENT: Fulcrum Environmental
Project: Pasco SD Drinking Water - Franklin Elemen

QC SUMMARY REPORT

Drinking Water Metals by EPA Method 200.8

Sample ID	1701027-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	1/5/2017	RunNo:	33739		
Client ID:	BATCH	Batch ID:	15847			Analysis Date:	1/5/2017	SeqNo:	640574		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	127	1.00	100.0	29.36	97.2	70	130	124.0	2.03	30	

Client Name: **FE**
 Logged by: **Clare Griggs**

Work Order Number: **1701028**
 Date Received: **1/5/2017 9:13:00 AM**

Chain of Custody

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

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 1	0.3
Cooler 2	0.6
Sample 1	0.1
Sample 2	0.8

* 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: Pasco SD Drinking Water - Franklin Elementary Additional Sampling
Project No: 161898.09
Location: Franklin Elementary School, Pasco, WA
Report To (PM): Ryan Mathews
PM Email: rmathews@fulcrum.net; cc: aenbysk@fulcrum.net

Date: 1/4/2016

Laboratory Project No (Internal): 1701028

Page: 1 of 1

Chain of Custody Record and Laboratory Services Agreement

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCS (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
FRA1417-KF-P-02	1/4/2017	900	DW										X				Analyze for Pb and Cu
FRA1417-KF-S-02	1/4/2017	900	DW										X				Analyze for Pb and Cu
FRA1417-KF-T-02	1/4/2017	900	DW										X				Analyze for Pb and Cu
FRA1417-KF-P-04	1/4/2017	900	DW										X				Analyze for Cu only
FRA1417-KF-S-04	1/4/2017	900	DW										X				HOLD
FRA1417-KF-T-04	1/4/2017	900	DW										X				HOLD
FRA1417-FC-P-48	1/4/2017	900	DW										X				Analyze for Pb and Cu
FRA1417-FC-P-49	1/4/2017	900	DW										X				Analyze for Pb and Cu



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: Pasco School District DW - Franklin Elementary
Work Order Number: 1704089

April 07, 2017

Attention Ryan Mathews:

Fremont Analytical, Inc. received 5 sample(s) on 4/7/2017 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: Pasco School District DW - Franklin Elemen
Work Order: 1704089

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1704089-001	FRA4617-DF-P-36	04/06/2017 9:00 AM	04/07/2017 10:25 AM
1704089-002	FRA4617-DF-S-36	04/06/2017 9:00 AM	04/07/2017 10:25 AM
1704089-003	FRA4617-DF-T-36	04/06/2017 9:00 AM	04/07/2017 10:25 AM
1704089-004	FRA4617-FC-P-48	04/06/2017 9:00 AM	04/07/2017 10:25 AM
1704089-005	FRA4617-FC-P-49	04/06/2017 9:00 AM	04/07/2017 10:25 AM

CLIENT: Fulcrum Environmental
Project: Pasco School District DW - Franklin 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:

1704089-001A 214679: Prep Comments for EPA200.8, Sample 1704089-001A: Turbidity: 0.32 NTU

1704089-004A 214680: Prep Comments for EPA200.8, Sample 1704089-004A: Turbidity: 0.01 NTU

1704089-005A 214681: Prep Comments for EPA200.8, Sample 1704089-005A: 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



Work Order: 1704089

Date Reported: 4/7/2017

CLIENT: Fulcrum Environmental

Project: Pasco School District DW - Franklin Elementary

Lab ID: 1704089-001

Client Sample ID: FRA4617-DF-P-36

Collection Date: 4/6/2017 9:00:00 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: 16723

Analyst: TN

Copper	1,130	0.500		µg/L	1	4/7/2017 3:41:49 PM
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Lab ID: 1704089-004

Client Sample ID: FRA4617-FC-P-48

Collection Date: 4/6/2017 9:00:00 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: 16723

Analyst: TN

Copper	0.537	0.500		µg/L	1	4/7/2017 3:45:50 PM
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Lab ID: 1704089-005

Client Sample ID: FRA4617-FC-P-49

Collection Date: 4/6/2017 9:00:00 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: 16723

Analyst: TN

Copper	1,280	0.500		µg/L	1	4/7/2017 3:49:52 PM
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Work Order: 1704089
CLIENT: Fulcrum Environmental
Project: Pasco School District DW - Franklin Elemen

QC SUMMARY REPORT

Drinking Water Metals by EPA Method 200.8

Sample ID	MB-16723	SampType:	MBLK	Units:	µg/L	Prep Date:	4/7/2017	RunNo:	35429		
Client ID:	MBLKW	Batch ID:	16723			Analysis Date:	4/7/2017	SeqNo:	678502		
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-16723	SampType: LCS			Units: µg/L		Prep Date: 4/7/2017			RunNo: 35429		
Client ID:	LCSW	Batch ID: 16723			Analysis Date: 4/7/2017					SeqNo: 678505		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Copper	96.5	0.500	100.0	0	96.5	85	115				
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Sample ID	1704069-009ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	4/7/2017	RunNo:	35429		
Client ID:	BATCH	Batch ID:	16723			Analysis Date:	4/7/2017	SeqNo:	678507		
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	1704069-009AMS	SampType: MS			Units: µg/L		Prep Date: 4/7/2017			RunNo: 35429		
Client ID:	BATCH	Batch ID: 16723			Analysis Date: 4/7/2017					SeqNo: 678508		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Copper	188	0.500	200.0	0.4218	93.9	70	130				
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Sample ID	1704069-009AMSD	SampType: MSD			Units: µg/L		Prep Date: 4/7/2017			RunNo: 35429		
Client ID:	BATCH	Batch ID: 16723			Analysis Date: 4/7/2017					SeqNo: 678509		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Copper	194	0.500	200.0	0.4218	97.0	70	130	188.3	3.16	30	
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Work Order Number: **1704089**

Date Received: **4/7/2017 10:25:00 AM**

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

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 $>0^{\circ}\text{C}$ 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 ☐
			HNO ₃
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 ☐	

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 #	Temp °C
Cooler	1.4
Sample	2.9

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: 509.575.8453

Project Name:

Project No:

Location:

Report To (PM):

PM Email:

Date: 4/6/17

Laboratory Project No (Internal):

1704089

Page: 1 of 1

Chain of Custody Record and Laboratory Services Agreement

Passo School District DW - Franklin Elementary

Collected by: Amanda Enbysk

From Rosalind Franklin STEM Elementary, Passo, WA

Ryan Mathews

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 (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 (801.1)	Comments
1 FRAT1017-0F-P-36	4/6/17	0900	DW														
2 FRAT1017-0F-S-36																	
3 FRAT1017-0F-T-36																	
4 FRAT1017-FC-P-48																	
5 FRAT1017-FC-P-49																	
6																	
7																	
8																	
9																	
10																	

****Metals Analysis (Circle):** MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn 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 Amelia McEl 4/6/17:1500 Date/Time 4/2/17 1025 Date/Time

Received OK Date/Time

Retained X Date/Time

Special Remarks: Please preserve all unpreserved

TAT: ASAP

TAT → SameDay* NextDay* 2 Day 3 Day STD

Please coordinate with the lab in advance