

November 6, 2017

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

**RE: Winter 2016 Drinking Water Sampling Results
Southridge High School, 3520 Southridge Boulevard, Kennewick, Washington**

Dear Keith:

On Thursday, December 22, 2016, Fulcrum Environmental Consulting, Inc. (Fulcrum) collected 39 drinking water samples for lead and copper analysis from Southridge High School (School) located at 3520 Southridge Boulevard in Kennewick, Washington. Initial sampling identified 21 fixture locations with copper concentrations above guidance levels. Fulcrum returned to the School on April 5, 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-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 December 22, 2016. Initial results identified 21 samples with copper concentrations above the Environmental Protection Agency (EPA) action level of 1,300 micrograms per liter ($\mu\text{g/L}$). 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, the District aggressively flushed the fixtures with cold water to clear the plumbing of copper construction debris, installed filtered bottle filling fountains, and removed fixtures that did not respond to aggressive flushing permanently from service. Fulcrum returned on April 5, 2017 and

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

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. A total of six fixtures, all water cooler fountains, did not respond to remediation and remained above the action level. Fulcrum recommended, and the District elected, to permanently remove the fixtures 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). See Figure 1-A and 1-B 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-A and 1-B 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 1-A and 1-B 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 21 samples with copper concentrations above the EPA action level of 1,300 µg/L. No samples were identified with lead concentrations above the EPA action level of 15 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 copper concentrations, the District completed an aggressive flush of the fixtures and installed filtered bottle filling fountains to replace most

water cooler fountains that produced elevated copper concentrations. Fulcrum returned on the morning following the remediation, April 5, 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 six of the fixtures. Fulcrum recommended, and the District elected, to permanently remove the remaining six fixtures permanently from service.

Recommendations

No samples were found to contain lead concentrations above the EPA action level of 15 µg/L. A total of 21 initial samples contained copper above the EPA action level of 1,300 µg/L. The District completed an aggressive flush and replaced identified water cooler fountains with filtered bottle filler fountains to reduce the copper concentration of the fixtures. Follow-up sampling yielded results below the EPA action level for all but six fixtures. Fulcrum recommended, and the District elected, to permanently remove the remaining fixtures 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-A: Sample Location Map – First Floor
Figure 1-B: Sample Location Map – Second Floor



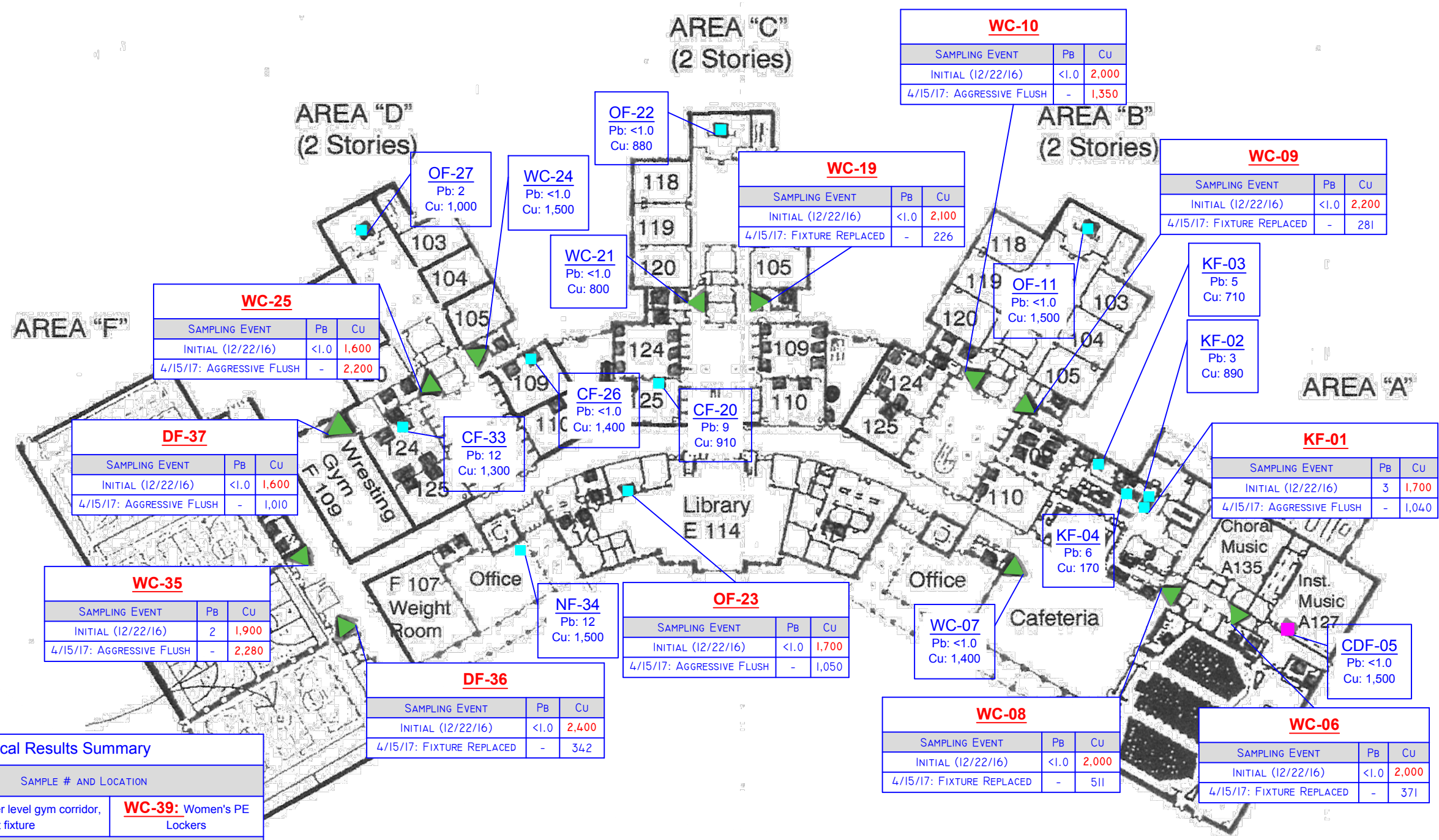
LEGEND

- 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.



Lower Level Analytical Results Summary		
SAMPLE # AND LOCATION		
SAMPLING EVENT	WC-38: Lower level gym corridor, right fixture	WC-39: Women's PE Lockers
LEAD RESULTS		
INITIAL (12/22/16)	<1.0	<1.0
COPPER RESULTS		
INITIAL (12/21/16)	2,000	2,000
4/15/17: AGGRESSIVE FLUSH AND FIXTURE REPLACEMENT	1,320	113

DRAWING PROVIDED BY KENNEWICK SCHOOL DISTRICT



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: Southridge High School Address: 3520 Southridge Boulevard, Kennewick, WA

Elementary Middle School High School Administration

Date of Construction: 1996 Modernizations: N/A

Fixture Type	Locations	Fixture Styles ¹	Samples	Ratio
Drinking fountain/water cooler (DF/WC)	35	4	22	63%
Kitchen Fixture (KF)	4	4	4	100%
Classroom faucet, including faucets in Food Labs and Life Sciences Classrooms (CF)	23	4	5	22%
Classroom drinking fountain at sink (CDF)	1	1	1	100%
Nurse’s Office/Health Room (NF)	1	1	1	100%
Teacher’s Lounges/Work Rooms (OF)	7	2	6	86%
TOTALS	71		39	55%

¹ Fixture styles are approximate based on sampler’s observations

Lead Sampler: Amanda Enbysk Date: 12/22/2016

Sample Prefix: SHS – 122216 – P (first-draw) – 01-41
School Code Date Sample Type Fixture Type Sample Number

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

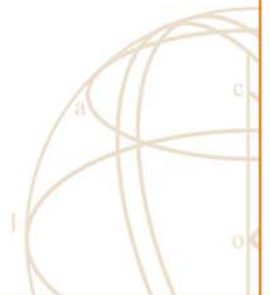


Table 1: Initial Sampling Analytical Results

Sample Identification and Location	Fixture Type	Lead Results (µg/L)	Copper Results (µg/L)
SHS122216-P-KF-01: Kitchen, north wall, right food prep	Kitchen Faucet	3	1,700
SHS122216-P-KF-02: Kitchen, north wall, left food prep	Kitchen Faucet	2	890
SHS122216-P-KF-03: Kitchen, west wall food prep	Kitchen Faucet	5	710
SHS122216-P-KF-04: Kitchen, Vat fill	Kitchen Faucet	6	170
SHS122216-P-CDF-05: Instrumental Music	Classroom Drinking Fountain	<1.0	1,500
SHS122216-P-WC-06: Corridor adjacent Choral Music, left fixture	Water Cooler Fountain	<1.0	2,000
SHS122216-P-WC-07: Cafeteria, south wall, center fixture	Water Cooler Fountain	<1.0	1,400
SHS122216-P-WC-08: Hallway adjacent Auditorium, right fixture	Water Cooler Fountain	<1.0	2,000
SHS122216-P-WC-09: 1st floor Area B, north fixture	Water Cooler Fountain	<1.0	2,200
SHS122216-P-WC-10: 1st floor Area B, south fixture	Water Cooler Fountain	<1.0	2,000
SHS122216-P-OF-11: Room B102	Office Faucet	<1.0	1,500
SHS122216-P-WC-12: 2nd floor Area B, north fixture	Water Cooler Fountain	2	870
SHS122216-P-WC-13: 2nd floor Area B, south fixture	Water Cooler Fountain	<1.0	1,600
SHS122216-P-CF-14: Room B210	Classroom Faucet	<1.0	1,600
SHS122216-P-WC-15: 2nd floor corridor between B and C, right fixture	Water Cooler Fountain	<1.0	1,800
SHS122216-P-WC-16: 2nd floor Area C, north fixture	Water Cooler Fountain	1	1,800
SHS122216-P-WC-17: 2nd floor Area C, south fixture	Water Cooler Fountain	<1.0	2,100
SHS122216-P-OF-18: Room C202	Office Faucet	<1.0	880
SHS122216-P-WC-19: 1st floor Area C, north fixture	Water Cooler Fountain	<1.0	2,100
SHS122216-P-CF-20: Room C125, right fixture	Classroom Faucet	9	910
SHS122216-P-WC-21: 1st floor Area C, south fixture	Water Cooler Fountain	<1.0	800
SHS122216-P-OF-22: 1st floor Area C, Teacher Planning	Office Faucet	<1.0	880
SHS122216-P-OF-23: Library Workroom	Office Faucet	<1.0	1,700
SHS122216-P-WC-24: 1st floor Area D, north fixture	Water Cooler Fountain	<1.0	1,500
SHS122216-P-WC-25: 1st floor Area D, south fixture	Water Cooler Fountain	<1.0	1,600
SHS122216-P-CF-26: Room D109, right fixture	Classroom Faucet	<1.0	1,400
SHS122216-P-OF-27: 1st floor Area D, Teacher Planning	Office Faucet	2	1,000
SHS122216-P-CF-28: Room D225	Classroom Faucet	2	1,200
SHS122216-P-WC-29: 2nd floor Area D, north fixture	Water Cooler Fountain	<1.0	2,000
SHS122216-P-WC-30: 2nd floor Area D, south fixture	Water Cooler Fountain	<1.0	1,900
SHS122216-P-WC-31: 2nd floor corridor between C and D, left fixture	Water Cooler Fountain	<1.0	2,500
SHS122216-P-OF-32: 2nd floor Area D, Teacher Planning	Office Faucet	<1.0	950
SHS122216-P-CF-33: Room D124, right fixture	Classroom Faucet	12	1,300
SHS122216-P-NF-34: Nurse's Office	Nurse's Faucet	12	1,500
SHS122216-P-WC-35: 1st floor, Main Gym entrance west wall, left fixture	Water Cooler Fountain	2	1,900
SHS122216-P-DF-36: 1st floor, Main Gym entrance, east wall, center fixture	Drinking Fountain	<1.0	2,400

Sample Identification and Location	Fixture Type	Lead Results (µg/L)	Copper Results (µg/L)
SHS122216-P-DF-37: Wrestling Gym	Drinking Fountain	<1.0	1,600
SHS122216-P-WC-38: Lower level gym corridor, right fixture	Water Cooler Fountain	<1.0	2,000
SHS122216-P-WC-39: Women's PE Lockers	Water Cooler Fountain	<1.0	2,000
<i>SHS122216-P-CF-40: Laboratory Spike</i>	<i>Lead and Copper Spike</i>	15	1,600
<i>SHS122216-P-CF-41: Laboratory Blank</i>	<i>Distilled Water Blank</i>	<1.0	<10
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 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
SHS122216-P-KF-04: Kitchen Vat Fill	Kitchen Faucet	8.69	-	23.0	-
SHS122216-P-WC-08: Main Hallway	Water Cooler Fountain	8.67	-	13.8	-
SHS122216-P-WC-12: North B area upstairs	Water Cooler Fountain	8.41	-	21.9	-
SHS122216-P-WC-16: C area north Faucet	Water Cooler Fountain	8.53	-	15.8	-
SHS122216-P-CF-20: Classroom 125	Classroom Faucet	8.34	-	19.2	-
SHS122216-P-WC-24: D area, first floor north	Water Cooler Fountain	8.36	-	20.8	-
SHS122216-P-CF-28: Room 225	Classroom Faucet	8.37	-	21.8	-
SHS122216-P-OF-32: D area, Second floor teacher planning	Office Faucet	8.37	-	22.0	-
SHS122216-P-DF-36: Main gym entrance east	Water Cooler Fountain	8.57	-	12.4	-



Table 3: Remedial Sampling Analytical Results

Sampling Event	Sample Identification																						
	KF-01	WC-06	WC-08	WC-09	WC-10	WC-13	CF-14	WC-15	WC-16	WC-17	WC-19	OF-23	WC-25	WC-29	WC-30	WC-31	WC-35	DF-36	DF-37	WC-38	WC-39	Laboratory Spike (-40)	Laboratory Blank (-41)
Initial (12/22/2016)	1,700	2,000	2,000	2,200	2,000	1,600	1,600	1,800	1,800	2,100	2,100	1,700	1,600	2,000	1,900	2,500	1,900	2,400	1,600	2,000	2,000	<i>1,600</i>	<i><10</i>
Aggressive Flush/ Fixture Replacement (4/15/2017)	1,040	371	511	281	1,350	107	656	2,210	-*	119	226	1,050	2,280	2,200	269	214	2,200	342	1,110	1,320	113	<i>1,330</i>	<i><0.5</i>
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 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.

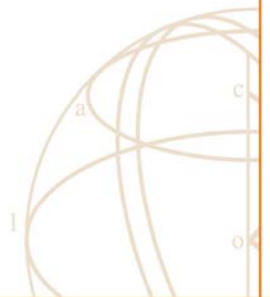
Results indicated in **bold** indicate concentrations above the action levels of 15 µg/L for lead and 1,300 µg/L for copper

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

*Fixture was removed from service prior to follow-up sampling.

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 41 sample(s) on 12/22/16 for analysis. These sample(s) have been assigned a login order number of W612121. Enclosed is the final report that consists of a summary report of the sample(s), and a copy of the chain of custody.

General Lab Comments

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

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

Matrix spike recovery failures are attributed to calibration exceedance and matrix effects and qualified per method prescription.

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

02/10/17

Project Coordinator II, M. Fernanda Pincheira

Date

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



Laboratory Report

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

RJ Lee Group No.: W612121
COC No.: Kennewick
Samples Received: 12/22/16
Analysis/Prep Date: 02/10/17
Report Date: 02/10/17

Client Project:

Fulcrum Kennewick

Sample Name: SHS122216-P-KF-01 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-01 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.7	0.1	X
Lead	EPA 200.8	0.003	0.001	

Sample Name: SHS122216-P-KF-02 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-02 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.89	0.01	
Lead	EPA 200.8	0.002	0.001	

Sample Name: SHS122216-P-KF-03 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-03 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.71	0.01	
Lead	EPA 200.8	0.005	0.001	

Sample Name: SHS122216-P-KF-04 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-04 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.17	0.01	
Lead	EPA 200.8	0.006	0.001	

Sample Name: SHS122216-P-CDF-05 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-05 **Date Analyzed:** 02/10/17

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

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

WWW.RJLEEGROUP.COM

Report Template: GenMetalReportFull_v12.rpt

Approved: 02/10/17 16:16
Report Time Stamp: 02/10/17 16:44



Sample Name: SHS122216-P-WC-06 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-06 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.0	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-WC-07 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-07 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.4	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-WC-08 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-08 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.0	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-WC-09 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-09 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.2	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-WC-10 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-10 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.0	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-OF-11 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-11 **Date Analyzed:** 02/10/17

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



Sample Name: SHS122216-P-WC-12 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-12 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.87	0.01	
Lead	EPA 200.8	0.002	0.001	

Sample Name: SHS122216-P-WC-13 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-13 **Date Analyzed:** 02/10/17

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

Sample Name: SHS122216-P-CF-14 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-14 **Date Analyzed:** 02/10/17

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

Sample Name: SHS122216-P-WC-15 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-15 **Date Analyzed:** 02/10/17

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

Sample Name: SHS122216-P-WC-16 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-16 **Date Analyzed:** 02/10/17

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

Sample Name: SHS122216-P-WC-17 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-17 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.1	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	



Sample Name: SHS122216-P-OF-18 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-18 **Date Analyzed:** 02/10/17

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

Sample Name: SHS122216-P-WC-19 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-19 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.1	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-CF-20 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-20 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.91	0.01	
Lead	EPA 200.8	0.009	0.001	

Sample Name: SHS122216-P-WC-21 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-21 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.80	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-OF-22 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-22 **Date Analyzed:** 02/10/17

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

Sample Name: SHS122216-P-OF-23 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-23 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.7	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	



Sample Name: SHS122216-P-WC-24 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-24 **Date Analyzed:** 02/10/17

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

Sample Name: SHS122216-P-WC-25 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-25 **Date Analyzed:** 02/10/17

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

Sample Name: SHS122216-P-CF-26 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-26 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.4	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-OF-27 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-27 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.0	0.1	X
Lead	EPA 200.8	0.002	0.001	

Sample Name: SHS122216-P-CF-28 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-28 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.2	0.1	X
Lead	EPA 200.8	0.002	0.001	

Sample Name: SHS122216-P-WC-29 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-29 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.0	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	



Sample Name: SHS122216-P-WC-30 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-30 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.9	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-WC-31 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-31 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.5	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-OF-32 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-32 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.95	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-CF-33 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-33 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.3	0.1	X
Lead	EPA 200.8	0.012	0.001	

Sample Name: SHS122216-P-NF-34 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-34 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.5	0.1	X
Lead	EPA 200.8	0.012	0.001	

Sample Name: SHS122216-P-OF-35 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-35 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.9	0.1	X
Lead	EPA 200.8	0.002	0.001	



Sample Name: SHS122216-P-WC-36 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-36 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.4	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-OF-37 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-37 **Date Analyzed:** 02/10/17

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

Sample Name: SHS122216-P-WC-38 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-38 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.0	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-WC-39 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-39 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	2.0	0.1	X
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: SHS122216-P-CF-40 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-40 **Date Analyzed:** 02/10/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.6	0.1	X
Lead	EPA 200.8	0.015	0.001	

Sample Name: SHS122216-P-CF-41 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612121-41 **Date Analyzed:** 02/09/17

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



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

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These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the samples covered by this report, RJ Lee Group will store the samples for a period of ninety (90) days before discarding. A shipping and handling fee will be assessed for the return of any samples. Unless otherwise noted, samples were received in an acceptable condition. This laboratory operates in accordance with ISO 17025 guidelines, and holds limited scopes of accreditation under ORELAP Lab Code 4061 AIHA-LAP, LLC Lab ID 178656 EPA ID WA01195 and WA DOE Lab ID C859. This report may not be used to claim product endorsement by any laboratory accrediting agency. The results contained in this report relate only to the items tested or to the sample(s) as received by the laboratory. Any reproduction of this document must be in full for the report to be valid. Quality control data is available upon request.

Request for Environmental and IH Laboratory Analytical Services

W612121

ATTENTION TO: RYAN MATHEWS		Purchase Order No.:		Client Job No.:		162017	
Lab Use Only		Project No.:		Client No.:		Turnaround Request	
Date Logged In:		Logged In By:		Standard: Yes No		If 'No', No. of Business Days:	
Name: Amanda Embysk, Ryan Mathews		Company: Fulcrum Environmental Consulting		Sample Purpose: Information X Regulatory <input type="checkbox"/> 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: rmathews@fulcrum.net		Multiple Sources #:			
Fax Results To:		Name: Lorie Bouillier		Sample Purpose: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> Other <input type="checkbox"/>			
Company: Fulcrum Environmental		Email: lbouillier@fulcrum.net		Preservation: <input type="checkbox"/> Unpres <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> Na ₂ SO ₄		Matrix: <input type="checkbox"/> WW=Wastewater <input type="checkbox"/> GW=Groundwater <input type="checkbox"/> S=Soil/Sludge <input type="checkbox"/> E=Extract	
Address: 406 North 2nd Street		City, State, Zip: Yakima, WA, 98901		FNO ₃		SW=Surface Water <input type="checkbox"/> DW=D-Drinking Water <input type="checkbox"/> O=Oil <input type="checkbox"/> X=Other	
Phone: (509) 574-0839		Fax: (509) 575-8453		Other		Container: <input type="checkbox"/> P=Plastic <input type="checkbox"/> G=Glass <input type="checkbox"/> W=Wipe <input type="checkbox"/> A=Air (filter or tube)	
Special Instructions		Send Invoice To		Analysis Requested		Pres. Upon Receipt (Y/N)	
Client Sample ID		Sample Description		EPA 200.8: Pb, Cu		UNPR	
SHS122216-P-KF-01		North portion, food prep east		<input checked="" type="checkbox"/>		DW	
SHS122216-P-KF-02		North portion, food prep west					
SHS122216-P-KF-03		West wall food prep					
SHS122216-P-KF-04		Kitchen vent #11					
SHS122216-P-COF-06		Agt. Instrumental music					
SHS122216-P-WC-06		Music hallway of A wing					
SHS122216-P-WC-07		Cafeteria, wall center					
SHS122216-P-WC-08		A area, main hallway,					
SHS122216-P-WC-09		B area, 1st floor North					
SHS122216-P-WC-10		B area, 1st floor South					
SHS122216-P-OT-11		B wing 10A teaching lab					
Chain of Custody		Relinquished By (Signature): <i>[Signature]</i>		Received By (Signature): <i>[Signature]</i>		Date: DEC 22 2016 Time: 1340	
Relinquished By (Print Name):		Date: 12/22/16 Time: 1340		Received By (Print Name): <i>[Signature]</i>		Relinquished To:	
Company Name:		Method of Shipment:		Company Name:		Method of Shipment:	
Chain of Custody		Relinquished By (Signature):		Received By (Signature):		Date: Time:	
Relinquished By (Print Name):		Date: Time:		Received By (Print Name):		Relinquished To: Time:	
Company Name:		Method of Shipment:		Company Name:		Method of Shipment:	

Pennsylvania - HQ
350 Hochberg Road
Monroeville, PA 15146

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

509.545.4989 Phone
509.544.6010 Fax



Request for Environmental and IH Laboratory Analytical Services

ATTENTION TO: RYAN MATHEWS		Purchase Order No.:		Client Job No.:		162017						
Lab Use Only	Project No.:	Client No.:	Turnaround Request		Standard:	Yes	No	If 'No', No. of Business Days:				
Date Logged In:	Logged In By:		Sample Purpose: Information X Regulatory <input type="checkbox"/> Accreditation (please list below):		System ID #:							
Name: Amanda Embysk, Ryan Mathews		Company: Fulcrum Environmental Consulting		DOH Source #:								
Address: 406 North 2nd Street		City, State, Zip: Yakima, WA, 98901		Multiple Sources #s:								
Phone: (509) 574-0839		Fax: (509) 575-8453		Sample Purpose: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> Other <input type="checkbox"/>								
Call with Verbal Results:		Email Results To: aembysk@fulcrum.net, CC: rmathews@fulcrum.net		Preservation: Unpres H ₂ SO ₄	Matrix: WW=Wastewater	Container: P=Plastic						
Fax Results To:		Name: Lorrie Boutillier		4°C HCl	GW=Groundwater	DW=Drinking Water	G=Glass					
Company: Fulcrum Environmental		Email: lboutillier@fulcrum.net		HNO ₃ NaOH	S=Soil/Sludge	O=Oil	W=Wipe					
Address: 406 North 2nd Street		City, State, Zip: Yakima, WA, 98901		Other Na ₂ SO ₄	E=Extract	X=Other	A=Air (filter or tube)					
Phone: (509) 574-0839		Fax: (509) 575-8453		Analysis Requested								
Special Instructions	Client Sample ID	Sample Description	Sample Date	Sample Time	Wipe Area / Air Volume	Pres. Upon Receipt (Y/N)	Preservation	Matrix	Container Type	pH	No. Containers	
	SHS122016-P-WC-12	8" area, upstairs N	1/28/16				UNPR	DW			17.2	
	SHS122016-P-WC-15	Classroom 210, 6" ring									17.4	
	SHS122016-P-CF-14	Upstairs hallway between 60C									14.3	
	SHS122016-P-WC-15	Upstairs hallway between 60C									14.3	
	SHS122016-P-WC-16	6" area, N fixture									13.3	
	SHS122016-P-WC-17	6" area, S fixture									13.3	
	SHS122016-P-DF-18	6" area, 500 workroom									14.1	
	SHS122016-P-WC-19	6" area downstairs N									14.1	
	SHS122016-P-CF-20	6" area, Classroom 125									15.8	
	SHS122016-P-WC-21	6" area, Classroom 5									15.8	
	SHS122016-P-DF-22	6" area, 1st floor teacher									15.2	
Chain of Custody	Relinquished By (Signature): <i>[Signature]</i>	Date: 1/28/16	Time: 1340	Chain of Custody		Received By (Signature): <i>[Signature]</i>	Date: DEC 22 2016	Time: 1340				
	Relinquished By (Print Name):	Method of Shipment:		Chain of Custody		Received By (Print Name): <i>[Signature]</i>	Relinquished To:					
	Company Name:	Date:		Chain of Custody		Company Name:	Method of Shipment:					
	Relinquished By (Signature):	Date:	Time:	Chain of Custody		Received By (Signature):	Date:	Time:				
	Relinquished By (Print Name):	Method of Shipment:		Chain of Custody		Received By (Print Name):	Relinquished To:					
	Company Name:	Date:		Chain of Custody		Company Name:	Method of Shipment:					

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Request for Environmental and IH Laboratory Analytical Services

ATTENTION TO: RYAN MATHEWS		Purchase Order No.: 162017		Client Job No.: 162017	
Lab Use Only	Project No.: Date Logged In: Logged In By:	Client No.: Name: Amanda Ebyusk, 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: aenbyusk@fulcrum.net, CC: rmathews@fulcrum.net Fax Results To:		Turnaround Request Standard: Yes No If 'No', No. of Business Days: Sample Purpose: Information X Regulatory <input type="checkbox"/> Accreditation (please list below): System ID #: DOH Source #:	
Report Results To	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	Chemistry Analysis Key Drinking Water Sample Only Multiple Sources #: Sample Purpose: A <input type="checkbox"/> B <input type="checkbox"/> Other <input type="checkbox"/> Preservation: Unpres H ₂ SO ₄ 4°C HCl NaOH Other Na ₂ SO ₄ Matrix: WW=Wastewater GW=Groundwater S=Soil/Sludge E=Extract Container: P=Plastic G=Glass W=Wipe A=Air (filter or tube) SW=Surface Water DW=Drinking Water O=Oil X=Other		Analysis Requested	
Send Invoice To	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	EPA 200.8: Pb, Cu		Pres. Upon Receipt (Y/N)	
Special Instructions	Client Sample ID	Sample Description	Sample Date	Sample Time Start Stop	Wipe Area / Air Volume
	STK122216-P-05-23	Library workroom	12/21/16		
	STK122216-P-WC-24	"D" area, 1st floor N			X
	STK122216-P-WC-25	"D" area 1st floor S			
	STK122216-P-CF-210	Classroom A10 P109			
	STK122216-P-DF-27	"D" area, 1st floor teacher			
	STK122216-P-CF-28	"D" area, 2nd floor room 205			
	STK122216-P-WC-29	"D" area, upstairs N			
	STK122216-P-WC-30	"D" area, upstairs S			
	STK122216-P-WC-31	up stairs hallway bet. C10			
	STK122216-P-DF-32	"D" area, 2nd floor planning			
	STK122216-P-CF-33	"D" area, classroom 125			
Chain of Custody	Relinquished By (Signature): <i>[Signature]</i> Relinquished By (Print Name): Company Name:	Date: 12/21/16 Time: 1:34P	Received By (Signature): <i>[Signature]</i> Received By (Print Name): Company Name:		Date: DEC 22 2016 Time: 1:34P
Chain of Custody	Relinquished By (Signature): Relinquished By (Print Name): Company Name:	Date: Relinquished To: Method of Shipment:	Received By (Signature): Received By (Print Name): Company Name:		Date: Relinquished To: Method of Shipment:

Pennsylvania - HQ
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Washington
Columbia Basin Analytical Laboratories
2710 North 20th Avenue
Pasco, WA 99301
509.545.4989 Phone
509.544.6010 Fax



Request for Environmental and IH Laboratory Analytical Services

ATTENTION TO: RYAN MATHEWS		Purchase Order No.:		Client Job No.:	
				162017	
Lab Use Only	Project No.:	Client No.:	Turnaround Request		
	Date Logged In:	Logged In By:	Standard: Yes	No	If 'No', No. of Business Days:
	Name: Amanda Embysk, Ryan Mathews		Sample Purpose: Information X	Regulatory	Accreditation (please list below):
	Company: Fulcrum Environmental Consulting		System ID #:		
	Address: 406 North 2nd Street		DOH Source #:		
	City, State, Zip: Yakima, WA, 98901		Multiple Sources #:		
Report Results To	Phone: (509) 574-0839	Fax: (509) 575-8453	Sample Purpose: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> Other		
	Call with Verbal Results:		Preservation: <input type="checkbox"/> H ₂ SO ₄	Matrix: <input type="checkbox"/> WW=Wastewater	Container: <input type="checkbox"/> P=Plastic
	Email Results To: aembysk@fulcrum.net, CC: rmathews@fulcrum.net		4°C	<input type="checkbox"/> GW=Groundwater	<input type="checkbox"/> DW=Drinking Water
	Fax Results To:		HNO ₃	<input type="checkbox"/> S=Soil/Sludge	<input type="checkbox"/> O=Oil
	Name: Lorie Boutilier		Other	<input type="checkbox"/> E=Extract	<input type="checkbox"/> X=Other
Send Invoice To	Company: Fulcrum Environmental	Email: lboutilier@fulcrum.net	Analysis Requested		
	Address: 406 North 2nd Street		Pres. Upon Receipt (Y/N)		
	City, State, Zip: Yakima, WA, 98901		Preservation		
	Phone: (509) 574-0839	Fax: (509) 575-8453	Matrix		
Special Instructions			Container Type		
			pH		
			No. Containers		
Client Sample ID	Sample Description	Sample Date	Start	Stop	Wipe Area / Air Volume
SHS120116-R-DF-34	Nurse's office	12/20/16			
SHS120116-R-DF-35	1st floor, main gym entrance W				
SHS120116-R-DF-36	1st floor, main gym entrance E				
SHS120116-R-DF-37	wrestling/gymnastics				
SHS120116-R-WC-38	Lower level gym hallway				
SHS120116-R-WC-39	Woman's PE locker				
SHS120116-R-CF-40	Area G classroom 1st				
SHS120116-R-CF-41	Area H classroom 209				
Chain of Custody	Relinquished By (Signature): <i>[Signature]</i>	Date: 12/20/16	Time: 1:35		
	Relinquished By (Print Name):	Relinquished To:			
	Company Name:	Method of Shipment:			
Chain of Custody	Received By (Signature): <i>[Signature]</i>	Date: DEC 22 2016	Time: 13:40		
	Received By (Print Name):	Relinquished To:			
	Company Name:	Method of Shipment:			

Pennsylvania - HQ
350 Hochberg Road
Monroeville, PA 15146
724.325.1776 Phone
724.733.1799 Fax

Washington
Columbia Basin Analytical Laboratories
2710 North 20th Avenue
Pasco, WA 99301
509.545.4989 Phone
509.544.6010 Fax



ATTACHMENT E

Remedial Analytical Results





Fulcrum Environmental

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

RE: Kennewick SD Drinking Water - Southridge HS
Work Order Number: 1704066

April 07, 2017

Attention Ryan Mathews:

Fremont Analytical, Inc. received 32 sample(s) on 4/6/2017 for the analyses presented in the following report.

Drinking Water Metals by EPA Method 200.8

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager



CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Southridge
Work Order: 1704066

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1704066-001	SHS4517-P-KF-01	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-002	SHS4517-S-KF-01	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-003	SHS4517-T-KF-01	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-004	SHS4517-P-WC-06	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-005	SHS4517-P-WC-08	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-006	SHS4517-P-WC-09	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-007	SHS4517-P-WC-10	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-008	SHS4517-P-WC-13	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-009	SHS4517-P-CF-14	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-010	SHS4517-S-CF-14	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-011	SHS4517-T-CF-14	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-012	SHS4517-P-WC-15	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-013	SHS4517-S-WC-15	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-014	SHS4517-T-WC-15	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-015	SHS4517-P-WC-17	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-016	SHS4517-P-WC-19	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-017	SHS4517-S-WC-19	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-018	SHS4517-T-WC-19	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-019	SHS4517-P-OF-23	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-020	SHS4517-S-OF-23	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-021	SHS4517-T-OF-23	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-022	SHS4517-P-WC-25	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-023	SHS4517-P-WC-29	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-024	SHS4517-P-WC-30	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-025	SHS4517-P-WC-31	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-026	SHS4517-P-DF-35	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-027	SHS4517-P-WC-36	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-028	SHS4517-P-DF-37	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-029	SHS4517-P-WC-38	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-030	SHS4517-P-WC-39	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-031	SHS4517-P-CF-40	04/05/2017 9:30 AM	04/06/2017 10:31 AM
1704066-032	SHS4517-P-CF-41	04/05/2017 9:30 AM	04/06/2017 10:31 AM

CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Southridge HS

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:

1704066-001A 214496: Prep Comments for EPA200.8, Sample 1704066-001A: Turbidity: 0.01 NTU
1704066-004A 214500: Prep Comments for EPA200.8, Sample 1704066-004A: Turbidity: 0.00 NTU
1704066-005A 214501: Prep Comments for EPA200.8, Sample 1704066-005A: Turbidity: 0.01 NTU
1704066-006A 214502: Prep Comments for EPA200.8, Sample 1704066-006A: Turbidity: 0.01 NTU
1704066-007A 214503: Prep Comments for EPA200.8, Sample 1704066-007A: Turbidity: 0.01 NTU
1704066-008A 214504: Prep Comments for EPA200.8, Sample 1704066-008A: Turbidity: 0.17 NTU
1704066-009A 214505: Prep Comments for EPA200.8, Sample 1704066-009A: Turbidity: 0.01 NTU
1704066-012A 214506: Prep Comments for EPA200.8, Sample 1704066-012A: Turbidity: 0.01 NTU
1704066-015A 214507: Prep Comments for EPA200.8, Sample 1704066-015A: Turbidity: 0.01 NTU
1704066-016A 214508: Prep Comments for EPA200.8, Sample 1704066-016A: Turbidity: 0.01 NTU
1704066-019A 214509: Prep Comments for EPA200.8, Sample 1704066-019A: Turbidity: 0.01 NTU
1704066-022A 214510: Prep Comments for EPA200.8, Sample 1704066-022A: Turbidity: 0.00 NTU
1704066-023A 214511: Prep Comments for EPA200.8, Sample 1704066-023A: Turbidity: 0.01 NTU
1704066-024A 214512: Prep Comments for EPA200.8, Sample 1704066-024A: Turbidity: 0.01 NTU
1704066-025A 214513: Prep Comments for EPA200.8, Sample 1704066-025A: Turbidity: 0.04 NTU
1704066-026A 214514: Prep Comments for EPA200.8, Sample 1704066-026A: Turbidity: 0.01 NTU
1704066-027A 214515: Prep Comments for EPA200.8, Sample 1704066-027A: Turbidity: 0.00 NTU
1704066-028A 214516: Prep Comments for EPA200.8, Sample 1704066-028A: Turbidity: 0.04 NTU
1704066-029A 214517: Prep Comments for EPA200.8, Sample 1704066-029A: Turbidity: 0.01 NTU
1704066-030A 214518: Prep Comments for EPA200.8, Sample 1704066-030A: Turbidity: 0.01 NTU
1704066-031A 214525: Prep Comments for EPA200.8, Sample 1704066-031A: Turbidity: 0.01 NTU
1704066-032A 214526: Prep Comments for EPA200.8, Sample 1704066-032A: Turbidity: 0.01 NTU

Qualifiers:

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

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Southridge HS

Lab ID: 1704066-001 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-KF-01 **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: 16721 Analyst: TN

Copper	1,040	0.500		µg/L	1	4/7/2017 10:50:49 AM
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Lab ID: 1704066-004 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-06 **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: 16721 Analyst: TN

Copper	371	0.500		µg/L	1	4/7/2017 11:06:54 AM
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Lab ID: 1704066-005 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-08 **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: 16721 Analyst: TN

Copper	511	0.500		µg/L	1	4/7/2017 11:10:56 AM
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CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Southridge HS

Lab ID: 1704066-006 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-09 **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: 16721 Analyst: TN

Copper	281	0.500		µg/L	1	4/7/2017 11:14:57 AM
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Lab ID: 1704066-007 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-10 **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: 16721 Analyst: TN

Copper	1,350	0.500		µg/L	1	4/7/2017 11:27:03 AM
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Lab ID: 1704066-008 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-13 **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: 16721 Analyst: TN

Copper	107	0.500		µg/L	1	4/7/2017 11:31:04 AM
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CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Southridge HS

Lab ID: 1704066-009 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-CF-14 **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: 16721 Analyst: TN

Copper	656	0.500		µg/L	1	4/7/2017 11:35:06 AM
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Lab ID: 1704066-012 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-15 **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: 16721 Analyst: TN

Copper	2,210	0.500		µg/L	1	4/7/2017 11:39:07 AM
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Lab ID: 1704066-015 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-17 **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: 16721 Analyst: TN

Copper	119	0.500		µg/L	1	4/7/2017 12:00:25 PM
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CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Southridge HS

Lab ID: 1704066-016 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-19 **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: 16721 Analyst: TN

Copper	226	0.500		µg/L	1	4/7/2017 12:04:27 PM
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Lab ID: 1704066-019 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-OF-23 **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: 16721 Analyst: TN

Copper	1,050	0.500		µg/L	1	4/7/2017 12:08:28 PM
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Lab ID: 1704066-022 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-25 **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: 16721 Analyst: TN

Copper	2,280	0.500		µg/L	1	4/7/2017 12:12:29 PM
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CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Southridge HS

Lab ID: 1704066-023 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-29 **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: 16721 Analyst: TN

Copper	2,200	0.500		µg/L	1	4/7/2017 12:16:31 PM
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Lab ID: 1704066-024 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-30 **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: 16721 Analyst: TN

Copper	269	0.500		µg/L	1	4/7/2017 12:20:32 PM
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Lab ID: 1704066-025 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-31 **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: 16721 Analyst: TN

Copper	214	0.500		µg/L	1	4/7/2017 12:24:33 PM
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CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Southridge HS

Lab ID: 1704066-026 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-DF-35 **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: 16721 Analyst: TN

Copper	2,220	0.500		µg/L	1	4/7/2017 12:28:35 PM
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Lab ID: 1704066-027 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-36 **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: 16721 Analyst: TN

Copper	342	0.500		µg/L	1	4/7/2017 12:32:36 PM
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Lab ID: 1704066-028 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-DF-37 **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: 16721 Analyst: TN

Copper	1,110	0.500		µg/L	1	4/7/2017 12:36:37 PM
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CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Southridge HS

Lab ID: 1704066-029 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-38 **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: 16721 Analyst: TN

Copper	1,320	0.500		µg/L	1	4/7/2017 12:48:43 PM
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Lab ID: 1704066-030 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-WC-39 **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: 16721 Analyst: TN

Copper	113	0.500		µg/L	1	4/7/2017 12:52:44 PM
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Lab ID: 1704066-031 **Collection Date:** 4/5/2017 9:30:00 AM
Client Sample ID: SHS4517-P-CF-40 **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: 16722 Analyst: TN

Copper	1,330	0.500		µg/L	1	4/7/2017 1:24:56 PM
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Work Order: **1704066**
Date Reported: **4/7/2017**

CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Southridge HS

Lab ID: 1704066-032

Collection Date: 4/5/2017 9:30:00 AM

Client Sample ID: SHS4517-P-CF-41

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: 16722

Analyst: TN

Copper	ND	0.500		µg/L	1	4/7/2017 1:37:02 PM
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Work Order: 1704066
CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Southridge

QC SUMMARY REPORT
Drinking Water Metals by EPA Method 200.8

Sample ID MB-16722	SampType: MBLK	Units: µg/L	Prep Date: 4/7/2017	RunNo: 35427							
Client ID: MBLKW	Batch ID: 16722	Analysis Date: 4/7/2017	SeqNo: 678405								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper ND 0.500

Sample ID LCS-16722	SampType: LCS	Units: µg/L	Prep Date: 4/7/2017	RunNo: 35427							
Client ID: LCSW	Batch ID: 16722	Analysis Date: 4/7/2017	SeqNo: 678406								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 98.2 0.500 100.0 0 98.2 85 115

Sample ID 1704067-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 4/7/2017	RunNo: 35427							
Client ID: BATCH	Batch ID: 16722	Analysis Date: 4/7/2017	SeqNo: 678408								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 963 0.500 932.8 3.19 30

Sample ID 1704067-001AMS	SampType: MS	Units: µg/L	Prep Date: 4/7/2017	RunNo: 35427							
Client ID: BATCH	Batch ID: 16722	Analysis Date: 4/7/2017	SeqNo: 678409								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 1,190 0.500 200.0 932.8 131 70 130 S

NOTES:

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

Sample ID 1704067-001AMSD	SampType: MSD	Units: µg/L	Prep Date: 4/7/2017	RunNo: 35427							
Client ID: BATCH	Batch ID: 16722	Analysis Date: 4/7/2017	SeqNo: 678410								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 1,140 0.500 200.0 932.8 103 70 130 1,195 4.82 30

Work Order: 1704066
CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water - Southridge

QC SUMMARY REPORT
Drinking Water Metals by EPA Method 200.8

Sample ID MB-16721	SampType: MBLK	Units: µg/L			Prep Date: 4/7/2017	RunNo: 35418					
Client ID: MBLKW	Batch ID: 16721				Analysis Date: 4/7/2017	SeqNo: 678226					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper ND 0.500

Sample ID LCS-16721	SampType: LCS	Units: µg/L			Prep Date: 4/7/2017	RunNo: 35418					
Client ID: LCSW	Batch ID: 16721				Analysis Date: 4/7/2017	SeqNo: 678227					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 96.8 0.500 100.0 0 96.8 85 115

Sample ID 1704066-001ADUP	SampType: DUP	Units: µg/L			Prep Date: 4/7/2017	RunNo: 35418					
Client ID: SHS4517-P-KF-01	Batch ID: 16721				Analysis Date: 4/7/2017	SeqNo: 678229					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 1,030 0.500 1,041 1.20 30

Sample ID 1704066-001AMS	SampType: MS	Units: µg/L			Prep Date: 4/7/2017	RunNo: 35418					
Client ID: SHS4517-P-KF-01	Batch ID: 16721				Analysis Date: 4/7/2017	SeqNo: 678230					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 1,240 0.500 200.0 1,041 102 70 130

Sample ID 1704066-001AMSD	SampType: MSD	Units: µg/L			Prep Date: 4/7/2017	RunNo: 35418					
Client ID: SHS4517-P-KF-01	Batch ID: 16721				Analysis Date: 4/7/2017	SeqNo: 678231					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 1,230 0.500 200.0 1,041 96.1 70 130 1,245 0.899 30



3600 Fremont Ave N.
Seattle, WA 98103

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

Chain of Custody Record and Laboratory Services Agreement

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: Kennwick SD Drinking Water - Southridge HS
Project No: 16207.21
Location: Southridge High School, Kennwick WA
Report To (PM): Ryan Mathews
PM Email: mathews@fulcrum.net

Date: 4/5/17

Laboratory Project No (Internal): _____

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Collected by: Amanda Embysk

*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 SHS4517-T-OF-23	4/6/17	0930	DW														H2O2 preserved	
2 SHS4517-P-WC-25																		HOLD, unpreserved
3 SHS4517-P-WC-29																		
4 SHS4517-P-WC-30																		
5 SHS4517-P-WC-31																		
6 SHS4517-P-DF-35																		
7 SHS4517-P-WC-36																		
8 SHS4517-P-DF-37																		
9 SHS4517-P-WC-38																		
10 SHS4517-P-WC-39																		

**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: 4/5/17; 1500 Date/Time
 Received: 4/6/2017 1031 Date/Time

Retinquired: 4/5/17; 1500 Date/Time
 Received: 4/6/2017 1031 Date/Time

Special Remarks: See page 1

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

