

November 3, 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
Amistad Elementary School, 930 West Fourth Avenue, Kennewick, Washington**

Dear Keith:

On Thursday, December 22, 2016, Fulcrum Environmental Consulting, Inc. (Fulcrum) collected 40 drinking water samples for lead and copper analysis from Amistad Elementary School (School) located at 930 West Fourth Avenue in Kennewick, Washington. Initial sampling identified four fixture locations with lead concentrations above guidance levels and one fixture location with a copper concentration above guidance levels. Fulcrum returned to the School on March 31, 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 four samples with lead concentrations above the Environmental Protection Agency (EPA) action level of 15 micrograms per liter ($\mu\text{g/L}$) and one sample with a copper concentration above the EPA action level of 1,300 $\mu\text{g/L}$. Upon receipt of results, the District removed the identified fixtures from service pending remediation and further testing.

The fixtures identified with elevated lead concentrations were 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 March 31, 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. No other fixtures of like style were replaced. 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. The identified fixture, located in Support Services 3, was also found with an elevated lead concentration. To remediate elevated copper, the District replaced and preconditioned the identified fixture to clear the plumbing of copper construction debris. Fulcrum returned on March 31, 2017 and collected samples to evaluate the success of the remediation. Follow-up samples found the copper concentration below the EPA action level, confirming the remediation was successful. Following sampling and review of laboratory results, Fulcrum recommended and the District elected to return the fixtures to service. Fulcrum recommended that the District replace all fixtures of like style to those initially identified with elevated lead.

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

Sampling Methodology

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

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

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

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

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

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 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 four samples with lead concentrations above the EPA action level of 15 µg/L and one sample with a copper concentration 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 fixtures. Fulcrum returned on March 31, 2017 following fixture replacement and preconditioning to collect follow-up samples from the initially identified fixtures. No other fixtures of like style were replaced. See Attachment F for a photograph layout with the identified fixture style.

To remediate the elevated copper concentration, the District replaced and preconditioned the identified fixture, located in Support Services 3. This fixture was also initially identified with an elevated lead concentration. Fulcrum returned following replacement and preconditioning, March 31, 2017, to collect follow-up samples from the fixture.

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

Recommendations

Four initial samples contained lead above the EPA action level of 15 µg/L and one initial sample contained copper above the EPA action level of 1,300 µg/L. The District replaced the identified fixtures with elevated lead and preconditioned the fixtures for 24 hours as specified in WAC 246-366A-130. The District completed an aggressive flush of the fixture identified with elevated copper by replacing and preconditioning the fixture. Follow-up sampling demonstrated that all lead and copper concentrations were below action levels. Following remedial sampling and review of laboratory results, Fulcrum recommended, and the District elected, to return the fixtures to service. Fulcrum recommends the District replace all fixtures of like style to those initially identified with elevated lead. See Attachment F for a photograph layout of the identified fixture style.

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

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

Sincerely,



Amanda Enbysk, GIT
Environmental Geologist

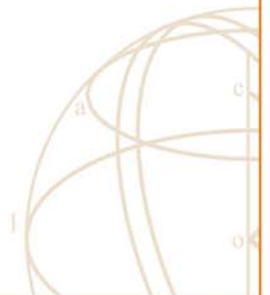


Ryan K. Mathews, CIH, CHMM
Principal



ATTACHMENT A

Figure 1: Sample Location Map



LEGEND

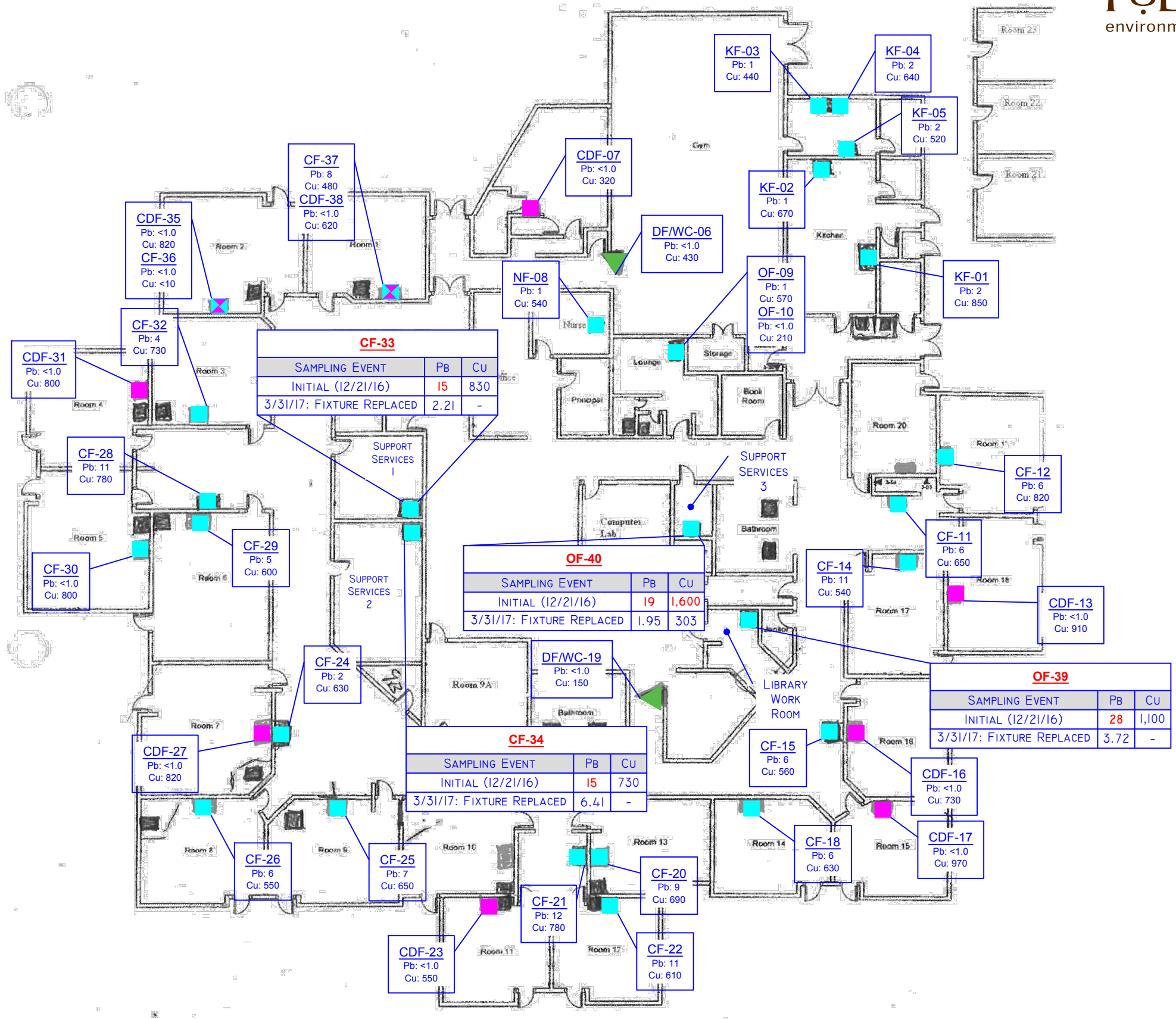
KF-## - Kitchen faucet
 CF-## - Classroom faucet
 CDF-## - Classroom drinking fountain
 OF-## - Office faucet
 WC-## - Water cooler fountain
 BF-## - Bottle filler fountain
 NF-## - Nurse's faucet

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

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

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

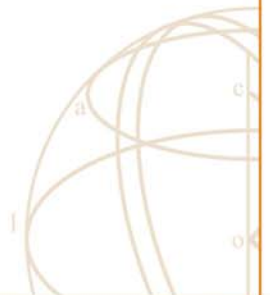
-North arrow represents Project North



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: Amistad Elementary School Address: 930 W 4th Avenue, Kennewick, WA

Elementary Middle School High School Administration

Date of Construction: 1992 Modernizations: N/A

Fixture Type	Locations	Fixture Styles ¹	Samples	Ratio
Drinking fountain/water cooler (DF/WC)	2	1	2	100%
Kitchen Fixture (KF)	5	5	5	100%
Classroom faucet, including faucets in Food Labs and Life Sciences Classrooms (CF)	27	2	19	70%
Classroom drinking fountain at sink (CDF)	22	1	9	41%
Nurse's Office/Health Room (NF)	1	1	1	100%
Teacher's Lounges/Work Rooms (OF)	4	2	4	100%
TOTALS	61		40	66%

¹ Fixture styles are approximate based on sampler's observations

Lead Sampler: Nathan Bostrom Date: 12/22/2016

Sample Prefix: AE – 122216 – P (first-draw) – – 01 to 42
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)
AE122216-P-KF-01: Main Kitchen; west wall	Kitchen Faucet	2	850
AE122216-P-KF-02: Main Kitchen; south wall	Kitchen Faucet	1	670
AE122216-P-KF-03: South Kitchen; South wall, left fixture	Kitchen Faucet	1	440
AE122216-P-KF-04: South Kitchen; South wall, right fixture	Kitchen Faucet	2	640
AE122216-P-KF-05: South Kitchen; North wall	Kitchen Faucet	2	520
AE122216-P-DF/WC-06: Gym	Drinking Fountain/Water Cooler	<1.0	430
AE122216-P-CDF-07: Music Room	Classroom Drinking Fountain	<1.0	320
AE122216-P-NF-08: Nurses' Office	Nurses Faucet	1	540
AE122216-P-OF-09: Teacher's lounge	Office Faucet	1	570
AE122216-P-OF-10: Teacher's lounge, instant hot	Office Faucet	<1.0	210
AE122216-P-CF-11: Hallway Adjacent Room 20	Classroom Faucet	6	650
AE122216-P-CF-12: Room 19	Classroom Faucet	6	820
AE122216-P-CDF-13: Room 18	Classroom Drinking Fountain	<1.0	910
AE122216-P-CF-14: Room 17	Classroom Faucet	11	540
AE122216-P-CF-15: Hallway adjacent Room 16	Classroom Faucet	6	560
AE122216-P-CDF-16: Room 16	Classroom Drinking Fountain	<1.0	730
AE122216-P-CDF-17: Room 15	Classroom Drinking Fountain	<1.0	970
AE122216-P-CF-18: Room 14	Classroom Faucet	6	630
AE122216-P-DF/WC-19: Commons	Drinking Fountain/Water Cooler	<1.0	150
AE122216-P-CF-20: Room 13	Classroom Faucet	9	690
AE122216-P-CF-21: Hallway adjacent Room 12	Classroom Faucet	12	780
AE122216-P-CF-22: Room 12	Classroom Faucet	11	610
AE122216-P-CDF-23: Room 11	Classroom Drinking Fountain	<1.0	550
AE122216-P-CF-24: Hallway adjacent Room 7	Classroom Faucet	2	630
AE122216-P-CF-25: Room 9	Classroom Faucet	7	650
AE122216-P-CF-26: Room 8	Classroom Faucet	6	550
AE122216-P-CDF-27: Room 7	Classroom Drinking Fountain	<1.0	820
AE122216-P-CF-28: Hallway adjacent Room 6	Classroom Faucet	11	780
AE122216-P-CF-29: Room 6	Classroom Faucet	5	600
AE122216-P-CF-30: Room 5	Classroom Faucet	<1.0	800
AE122216-P-CDF-31: Room 4	Classroom Drinking Fountain	<1.0	800
AE122216-P-CF-32: Room 3	Classroom Faucet	4	730
AE122216-P-CF-33: Support Services 1	Classroom Faucet	15	830
AE122216-P-CF-34: Support Services 2	Classroom Faucet	15	730
AE122216-P-CDF-35: Room 2	Classroom Drinking Fountain	<1.0	820
AE122216-P-CF-36: Room 2	Classroom Faucet	<1.0	<10
AE122216-P-CF-37: Room 1	Classroom Faucet	8	480

Sample Identification and Location	Fixture Type	Lead Results (µg/L)	Copper Results (µg/L)
AE122216-P-CDF-38: Room 1	Classroom Drinking Fountain	<1.0	620
AE122216-P-OF-39: Library Workroom	Office Faucet	28	1,100
AE122216-P-OF-40: Support Services 3	Office Faucet	19	1,600
<i>AE122216-P-CF-41: Laboratory Blank - labeled Room 10</i>	<i>Distilled Water Blank</i>	<1.0	<10
<i>AE122216-P-CDF-42: Laboratory Spike - labeled Room 10</i>	<i>Lead and Copper Spike</i>	14	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 Identification and Location	pH Flush	pH Sample	Temperature Flush (°C)	Temperature Sample (°C)
KF-01: Main Kitchen; west wall	7.99	7.98	18.8	16.7
NF-08: Nurses' Office	8.06	7.81	19.8	19.3
CDF-13: Room 18	8.09	7.85	20.7	19.0
CDF-16: Room 16	7.79	7.78	19.2	20.1
CF-20: Room 13	7.94	7.9	20.1	19.0
CF-24: Hallway adjacent Room 7	7.84	7.83	20.5	19.9
CF-28: Hallway adjacent Room 6	8.02	7.82	20.9	18.6
CF-32: Room 3	-	7.87	-	18.1
CF-36: Room 2	7.83	7.72	19.4	18.8
OF-40: Support Services 3	7.82	7.72	20.5	21.0

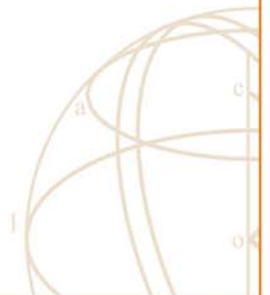
Table 3: Remedial Sampling Analytical Results Summary

Sampling Event	Sample Identification and Location					
	CF-33: Support Services 1	CF-34: Support Services 2	OF-39: Library Workroom	OF-40: Support Services 3	CF-41: Laboratory Blank	CDF-42: Laboratory Spike
Lead Results						
Initial (12/22/2016)	15	15	28	19	<1.0	<i>14</i>
Fixtures Replaced (3/31/2017)	2.21	6.41	3.72	1.95	<1.00	<i>16.4</i>
EPA Action Level	15	15	15	15	15	15
Copper Results						
Initial (12/22/2016)	830	730	1,100	1,600	<10	<i>1,200</i>
Fixtures Replaced (3/31/2017)	-	-	-	303	<0.5	<i>1,270</i>
EPA Action Level	1,300	1,300	1,300	1,300	1,300	1,300

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

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 42 sample(s) on 12/22/16 for analysis. These sample(s) have been assigned a login order number of W612123. 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.

Sample W612123-15 reported for Lead at DF1, thereby lowering the PQL.

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

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

02/17/17

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.: W612123
COC No.: Kennewick
Samples Received: 12/22/16
Analysis/Prep Date: 02/15/17
Report Date: 02/17/17

Client Project:

Fulcrum Kennewick

Sample Name: AE122216-P-KF-01 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-01 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.85	0.01	
Lead	EPA 200.8	0.002	0.001	

Sample Name: AE122216-P-KF-02 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-02 **Date Analyzed:** 02/15/17

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: AE122216-P-KF-03 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-03 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.44	0.01	
Lead	EPA 200.8	0.001	0.001	

Sample Name: AE122216-P-KF-04 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-04 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.64	0.01	
Lead	EPA 200.8	0.002	0.001	

Sample Name: AE122216-P-KF-05 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-05 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.52	0.01	
Lead	EPA 200.8	0.002	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: 02/17/17 12:16
Report Time Stamp: 02/17/17 13:48



Sample Name: AE122216-P-DF/WC-06 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-06 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.43	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: AE122216-P-CDF-07 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-07 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.32	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: AE122216-P-NF-08 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-08 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.54	0.01	
Lead	EPA 200.8	0.001	0.001	

Sample Name: AE122216-P-OF-09 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-09 **Date Analyzed:** 02/15/17

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: AE122216-P-OF-10 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-10 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.21	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: AE122216-P-CF-11 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-11 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.65	0.01	
Lead	EPA 200.8	0.006	0.001	



Sample Name: AE122216-P-CF-12 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-12 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.82	0.01	
Lead	EPA 200.8	0.006	0.001	

Sample Name: AE122216-P-CDF-13 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-13 **Date Analyzed:** 02/15/17

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

Sample Name: AE122216-P-CF-14 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-14 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.54	0.01	
Lead	EPA 200.8	0.011	0.001	

Sample Name: AE122216-P-CF-15 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-15 **Date Analyzed:** 02/13/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.56	0.01	
Lead	EPA 200.8	0.0060	0.0001	

Sample Name: AE122216-P-CDF-16 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-16 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.73	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: AE122216-P-CDF-17 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-17 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.97	0.01	
Lead	EPA 200.8	< 0.0010	0.001	



Sample Name: AE122216-P-CF-18 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-18 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.63	0.01	
Lead	EPA 200.8	0.006	0.001	

Sample Name: AE122216-P-DF/WC-19 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-19 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.15	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: AE122216-P-CF-20 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-20 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.69	0.01	
Lead	EPA 200.8	0.009	0.001	

Sample Name: AE122216-P-CF-21 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-21 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.78	0.01	
Lead	EPA 200.8	0.012	0.001	

Sample Name: AE122216-P-CF-22 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-22 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.61	0.01	
Lead	EPA 200.8	0.011	0.001	

Sample Name: AE122216-P-CDF-23 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-23 **Date Analyzed:** 02/15/17

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



Sample Name: AE122216-P-CF-24 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-24 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.63	0.01	
Lead	EPA 200.8	0.002	0.001	

Sample Name: AE122216-P-CF-25 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-25 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.65	0.01	
Lead	EPA 200.8	0.007	0.001	

Sample Name: AE122216-P-CF-26 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-26 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.55	0.01	
Lead	EPA 200.8	0.006	0.001	

Sample Name: AE122216-P-CDF-27 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-27 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.82	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: AE122216-P-CF-28 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-28 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.78	0.01	
Lead	EPA 200.8	0.011	0.001	

Sample Name: AE122216-P-CF-29 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-29 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.60	0.01	
Lead	EPA 200.8	0.005	0.001	

**Sample Name:** AE122216-P-CF-30**Matrix:** Potable Water**Date Received:** 12/22/16**RJ Lee Grp. ID:** W612123-30**Date Analyzed:** 02/15/17

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: AE122216-P-CDF-31**Matrix:** Potable Water**Date Received:** 12/22/16**RJ Lee Grp. ID:** W612123-31**Date Analyzed:** 02/15/17

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: AE122216-P-CF-32**Matrix:** Potable Water**Date Received:** 12/22/16**RJ Lee Grp. ID:** W612123-32**Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.73	0.01	
Lead	EPA 200.8	0.004	0.001	

Sample Name: AE122216-P-CF-33**Matrix:** Potable Water**Date Received:** 12/22/16**RJ Lee Grp. ID:** W612123-33**Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.83	0.01	
Lead	EPA 200.8	0.015	0.001	

Sample Name: AE122216-P-CF-34**Matrix:** Potable Water**Date Received:** 12/22/16**RJ Lee Grp. ID:** W612123-34**Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.73	0.01	
Lead	EPA 200.8	0.015	0.001	

Sample Name: AE122216-P-CDF-35**Matrix:** Potable Water**Date Received:** 12/22/16**RJ Lee Grp. ID:** W612123-35**Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.82	0.01	
Lead	EPA 200.8	< 0.0010	0.001	



Sample Name: AE122216-P-CF-36 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-36 **Date Analyzed:** 02/15/17

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

Sample Name: AE122216-P-CF-37 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-37 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.48	0.01	
Lead	EPA 200.8	0.008	0.001	

Sample Name: AE122216-P-CDF-38 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-38 **Date Analyzed:** 02/15/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	0.62	0.01	
Lead	EPA 200.8	< 0.0010	0.001	

Sample Name: AE122216-P-OF-39 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-39 **Date Analyzed:** 02/16/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.1	0.1	X
Lead	EPA 200.8	0.028	0.001	

Sample Name: AE122216-P-OF-40 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-40 **Date Analyzed:** 02/16/17

Analyte	Method	Result (mg/L)	PQL (mg/L)	Qualifiers
Copper	EPA 200.8	1.6	0.1	X
Lead	EPA 200.8	0.019	0.001	

Sample Name: AE122216-P-CF-41 **Matrix:** Potable Water **Date Received:** 12/22/16
RJ Lee Grp. ID: W612123-41 **Date Analyzed:** 02/16/17

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



Sample Name: AE122216-P-CDF-42 **Matrix:** Potable Water
RJ Lee Grp. ID: W612123-42

Date Received: 12/22/16

Date Analyzed: 02/16/17

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

Report Qualifiers:

A = Target Analyte media breakthrough suspect, see analytical report

D = Analyte analyzed in a dilution

E = Report concentration was above the instrument calibration range

J = Analyte detected below quantitation limits, concentration is estimated

P = Library spectrum match, rsd >90% w RT match

Q = Result out of method specific acceptance QC criteria

S = Spike Recovery outside accepted recovery limits

Z = Not ELAP accredited analyte

ND = Not Detected

B = Analyte detected in the associated blank

d = Data that exceeds the RSD criteria set by the SOP

H = Holding times for preparation or analysis exceeded

L = Sample condition at receipt out of compliance with method defined conditions

R = RPD (relative percent difference) outside accepted recovery limits

U = Analyte analyzed for but not detected

N/A = Not Applicable

Scientist II DeNomy Dage

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

W612123

ATTENTION TO: RYAN MATHEWS		Purchase Order No.: 162017		Client Job No.: 162017	
Lab Use Only	Project No.: Date Logged In:	Client No.: Logged In By:	Turnaround Request	Standard: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If 'No,' No. of Business Days:
Name: Amanda Embysk, Ryan Mathews Company: Fulcrum Environmental Consulting Address: 406 North 2nd Street City, State, Zip: Yakima, WA, 98901 Phone: (509) 574-0839 Fax: (509) 575-8453 Call with Verbal Results: Email Results To: aembysk@fulcrum.net, CC: rmathews@fulcrum.net Fax Results To:			Drinking Water Sample Only	Sample Purpose: <input checked="" type="checkbox"/> Information <input checked="" type="checkbox"/> Regulatory <input type="checkbox"/> Accreditation (please list below): System ID #: _____ DOH Source #: _____ Multiple sources #: _____	
Name: Lorrie Bottiller 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 Unpres H ₂ SO ₄ 4°C HCl HNO ₃ NaOH Other Na ₂ SO ₄	Matrix: WW=Wastewater GW=Groundwater S=Soil/Sediment E=Extract	Container: P=Plastic G=Glass W=Wipe A=Air (filter or tube)
Send Invoice To Fulcrum Environmental Email: lbottiller@fulcrum.net			Analysis Requested		
Special Instructions			Pres. Upon Receipt (Y/N)		
Client Sample ID	Sample Description	Sample Date	Start	Stop	Wipe Area / Air Volume
AE12216-P-KP-01	Kitchen Faucet	12-22-16			
AE12216-P-KP-02					
AE12216-P-KP-03					
AE12216-P-KP-04					
AE12216-P-KP-05					
AE12216-P-DPbc-06	Gym				
AE12216-P-COP-07	Music RM				
AE12216-P-NF-08	Nurse Office				
AE12216-P-OF-09	T-lounge faucet				
AE12216-P-OF-10	T-lounge Hot Water				
AE12216-P-OF-11	Hallway-class faucet-RM16				
Relinquished By (Signature): <i>Boethen Backstrom</i> Relinquished By (Print Name): <i>Boethen Backstrom</i> Company Name: <i>Fulcrum</i>		Date: <i>12-22-16</i> Time: <i>2:20</i>		Chain of Custody	
Relinquished By (Signature): Relinquished By (Print Name): Company Name:		Date: Time:		Received By (Signature): Received By (Print Name): Company Name:	
Relinquished By (Signature): Relinquished By (Print Name): Company Name:		Date: Time:		Received By (Signature): Received By (Print Name): Company Name:	

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



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.:	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):								
Report Results To	Name: Amanda Embysk, Ryan Mathews	Company: Fulcrum Environmental Consulting	System ID #:								
	Address: 406 North 2nd Street	City, State, Zip: Yakima, WA, 98901	DOH Source #:								
	Phone: (509) 574-0839	Fax: (509) 575-8453	Multiple Sources #:								
	Call with Verbal Results:	Email Results To: aembysk@fulcrum.net, CC: rmathews@fulcrum.net	Sample Purpose: A <input type="checkbox"/> B <input type="checkbox"/> Other <input type="checkbox"/>								
	Fax Results To:	Name: Lorrie Boutillier	Preservation:								
	Company: Fulcrum Environmental	Address: 406 North 2nd Street	Unpres H ₂ SO ₄		Matrix: WW=Wastewater GW=Groundwater S=Soil/Sludge E=Extract						
	City, State, Zip: Yakima, WA, 98901	Phone: (509) 574-0839	4°C HCl		SW=Surface Water DW=Drinking Water						
	Fax: (509) 575-8453	Fax: (509) 575-8453	HNO ₃ NaOH		O=Oil X=Other						
			Other Na ₂ SO ₄		A=Air (filter or tube)						
Special Instructions	Analysis Requested										
Client Sample ID	Sample Description	Sample Date	Start	Stop	Wipe Area / Air Volume	Pres. Upon Receipt (Y/N)	Preservation	Matrix	Container Type	pH	No. Containers
AE122216-P-CF-12	RM-19	6-22-16					UNPR.	DW			173
AE122216-P-COF-13	RM-18										161
AE122216-P-CF-14	RM-17										141
AE122216-P-CF-15	Hallway next to RM 16										154
AE122216-P-COF-16	RM 16										149
AE122216-P-COF-17	RM-15										154
AE122216-P-CF-18	RM-M										151
AE122216-P-CF-19	Common work										146
AE122216-P-CF-20	RM-13										151
AE122216-P-CF-21	Hallway next to rm 13										146
AE122216-P-CF-22	RM-12										130
Chain of Custody	Relinquished By (Signature): <i>Mu W</i>	Date: 6-22-16	Time: 2:30	Chain of Custody		Received By (Signature): <i>[Signature]</i>	Date: DEC 22 2016	Time: 1430			
	Relinquished By (Print Name): <i>Mu W</i>	Method of Shipment:		Chain of Custody		Received By (Print Name): <i>[Signature]</i>	Relinquished To:				
	Company Name:			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):	Relinquished To:		Chain of Custody		Received By (Print Name):	Relinquished To:				
	Company Name:	Method of Shipment:		Chain of Custody		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

724.325.1776 Phone
724.733.1799 Fax

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):							
Report Results To	Name: Amanda Enbyk, Ryan Mathews		Drinking Water Sample Only	System ID #:								
	Company: Fulcrum Environmental Consulting			DOH Source #:								
	Address: 406 North 2nd Street			Multiple Sources #:								
	City, State, Zip: Yakima, WA, 98901			Sample Purpose: A <input type="checkbox"/> B <input type="checkbox"/> Other <input type="checkbox"/>								
	Phone: (509) 574-0839	Fax: (509) 575-8453		Preservation:	H ₂ SO ₄	Matrix:	SW=Surface Water					
	Call with Verbal Results:				4°C	WW=Wastewater	DW=Drinking Water					
	Email Results To: aenbyk@fulcrum.net, Cc: rmathews@fulcrum.net				HNO ₃	GW=Groundwater	O=Oil					
	Fax Results To:				Other	S=Soil/Sludge	X=Other					
	Name: Lorrie Boutillier				Na ₂ SO ₄	E=Extract						
Send Invoice To	Company: Fulcrum Environmental	Email: lboutillier@fulcrum.net					Container:					
	Address: 406 North 2nd Street						P=Plastic					
	City, State, Zip: Yakima, WA, 98901						G=Glass					
	Phone: (509) 574-0839	Fax: (509) 575-8453					W=Wipe					
							A=Air (filter or tube)					
Special Instructions												
Client Sample ID	Sample Description	Sample Date	Sample Time	Wipe Area / Air Volume	ERA 200.8: Pb, Cu	Analysis Requested	Pres. Upon Receipt (Y/N)	Preservation	Matrix	Container Type	pH	No. Containers
AE122216-P-CF-23	RIM-11	12-22-16										
AE122216-P-CF-24	Holloway next to RIM 7											
AE122216-P-CF-25	RIM 8											
AE122216-P-CF-26	RIM 9											
AE122216-P-CF-27	RIM 7											
AE122216-P-CF-28	Holloway next to RIM 5											
AE122216-P-CF-29	RIM 4											
AE122216-P-CF-30	RIM 5											
AE122216-P-CF-31	RIM 4											
AE122216-P-CF-32	RIM 3											
AE122216-P-CF-33	See map											
Chain of Custody	Relinquished By (Signature): Nathan Bostrom	Date: 12-22-16	Time: 2:20	Relinquished To:	Received By (Signature): [Signature]	Date: DEC 22 2016	Time: 14:20	Relinquished To:				
Chain of Custody	Relinquished By (Print Name): Nathan Bostrom	Method of Shipment:		Relinquished To:	Received By (Print Name): [Signature]			Relinquished To:				
Chain of Custody	Relinquished By (Signature):	Date:	Time:	Relinquished To:	Received By (Signature):	Date:	Time:	Relinquished To:				
Chain of Custody	Relinquished By (Print Name):	Method of Shipment:		Relinquished To:	Received By (Print Name):			Relinquished To:				

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 Enbysk, Ryan Mathews			Drinking Water		DOH Source #:			
	Company: Fulcrum Environmental Consulting			Sample Only		Multiple Sources #s:			
	Address: 406 North 2nd Street			Chemistry Analysis Key		Preservation: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> Other <input type="checkbox"/>			
	City, State, Zip: Yakima, WA, 98901			Matrix:		WW=Wastewater		SW=Surface Water	
	Phone: (509) 574-0839 Fax: (509) 575-8453			4 C		GW=Groundwater		DW=Drinking Water	
	Call with Verbal Results:			HNO ₃		S=Soil/Sludge		O=Oil	
	Email Results To: aenbysk@fulcrum.net, CC: rmathews@fulcrum.net			Other		E=Extract		X=Other	
	Fax Results To:			Na ₂ SO ₄		E=Extract		A=Air (filter or tube)	
	Name: Lorrie Boutillier			Analysis Requested		Pres. Upon Receipt (Y/N)		Preservation	
	Company: Fulcrum Environmental			ERA 2008: Pb, Cu				Matrix	
	Address: 406 North 2nd Street							Container Type	
	City, State, Zip: Yakima, WA, 98901							pH	
	Phone: (509) 574-0839 Fax: (509) 575-8453							No. Containers	
Special Instructions									
Send Invoice To	Client Sample ID	Sample Description	Sample Date	Sample Time	Wipe Area / Air Volume				
	AE122216-P-8-FB34	Special Program	12-22-16						
	AE122216-P-CP-35	RM 2							
	AE122216-P-CP-36	RM 2							
	AE122216-P-CP-37	RM 1							
	AE122216-P-CP-38	RM 1							
	AE122216-P-OP-35	Library							
	AE122216-P-OP-46	Office across from teacher lounge							
	AE122216-P-CP-41	RM 16							
	AE122216-P-CP-42	RM 16							
Chain of Custody	Relinquished By (Signature):	Date:	Time:						
	Relinquished By (Print Name):	Relinquished To:	Method of Shipment:						
	Company Name: Fulcrum								
Chain of Custody	Received By (Signature):	Date:	Time:						
	Received By (Print Name):	Relinquished To:	Method of Shipment:						
	Company Name:								

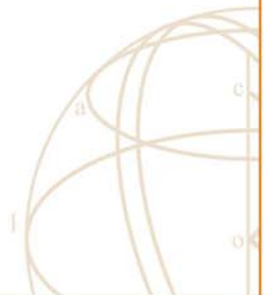
Pennsylvania - HQ
350 Hochberg Road
Monroeville, PA 15146
724.325.1776 Phone
724.733.1799 Fax

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-Amistad Elementary
Work Order Number: 1704003**

April 03, 2017

Attention Ryan Mathews:

Fremont Analytical, Inc. received 14 sample(s) on 4/3/2017 for the analyses presented in the following report.

Drinking Water Metals by EPA Method 200.8

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager



Date: 04/03/2017

CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water-Amistad Ele
Work Order: 1704003

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1704003-001	AE33117-P-CF-33	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-002	AE33117-S-CF-33	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-003	AE33117-T-CF-33	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-004	AE33117-P-CF-34	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-005	AE33117-S-CF-34	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-006	AE33117-T-CF-34	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-007	AE33117-P-OF-39	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-008	AE33117-S-OF-39	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-009	AE33117-T-OF-39	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-010	AE33117-P-OF-40	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-011	AE33117-S-OF-40	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-012	AE33117-T-OF-40	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-013	AE33117-P-CF-41	03/31/2017 6:30 AM	04/03/2017 9:22 AM
1704003-014	AE33117-P-CF-42	03/31/2017 6:30 AM	04/03/2017 9:22 AM

CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water-Amistad 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:

1704003-001A 213712: Prep Comments for EPA200.8, Sample 1704003-001A: Turbidity: 0.40 NTU
1704003-004A 213713: Prep Comments for EPA200.8, Sample 1704003-004A: Turbidity: 0.93 NTU
1704003-007A 213714: Prep Comments for EPA200.8, Sample 1704003-007A: Turbidity: 0.05 NTU
1704003-010A 213715: Prep Comments for EPA200.8, Sample 1704003-010A: Turbidity: 0.17 NTU
1704003-013A 213716: Prep Comments for EPA200.8, Sample 1704003-013A: Turbidity: 0.00 NTU
1704003-014A 213717: Prep Comments for EPA200.8, Sample 1704003-014A: 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-Amistad Elementary

Lab ID: 1704003-001

Collection Date: 3/31/2017 6:30:00 AM

Client Sample ID: AE33117-P-CF-33

Matrix: Drinking Water

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

Drinking Water Metals by EPA Method 200.8

Batch ID: 16676 Analyst: TN

Lead	2.21	1.00		µg/L	1	4/3/2017 1:59:47 PM
------	------	------	--	------	---	---------------------

Lab ID: 1704003-004

Collection Date: 3/31/2017 6:30:00 AM

Client Sample ID: AE33117-P-CF-34

Matrix: Drinking Water

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

Drinking Water Metals by EPA Method 200.8

Batch ID: 16676 Analyst: TN

Lead	6.41	1.00		µg/L	1	4/3/2017 2:03:48 PM
------	------	------	--	------	---	---------------------

Lab ID: 1704003-007

Collection Date: 3/31/2017 6:30:00 AM

Client Sample ID: AE33117-P-OF-39

Matrix: Drinking Water

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

Drinking Water Metals by EPA Method 200.8

Batch ID: 16676 Analyst: TN

Lead	3.72	1.00		µg/L	1	4/3/2017 2:07:49 PM
------	------	------	--	------	---	---------------------



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

Lab ID: 1704003-010

Collection Date: 3/31/2017 6:30:00 AM

Client Sample ID: AE33117-P-OF-40

Matrix: Drinking Water

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

Drinking Water Metals by EPA Method 200.8

Batch ID: 16676 Analyst: TN

Copper	303	0.500		µg/L	1	4/3/2017 2:23:18 PM
Lead	1.95	1.00		µg/L	1	4/3/2017 2:23:18 PM

Lab ID: 1704003-013

Collection Date: 3/31/2017 6:30:00 AM

Client Sample ID: AE33117-P-CF-41

Matrix: Drinking Water

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

Drinking Water Metals by EPA Method 200.8

Batch ID: 16676 Analyst: TN

Copper	ND	0.500		µg/L	1	4/3/2017 2:27:19 PM
Lead	ND	1.00		µg/L	1	4/3/2017 2:27:19 PM

Lab ID: 1704003-014

Collection Date: 3/31/2017 6:30:00 AM

Client Sample ID: AE33117-P-CF-42

Matrix: Drinking Water

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

Drinking Water Metals by EPA Method 200.8

Batch ID: 16676 Analyst: TN

Copper	1,270	0.500		µg/L	1	4/3/2017 2:31:21 PM
Lead	16.4	1.00		µg/L	1	4/3/2017 2:31:21 PM

Work Order: 1704003
CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water-Amistad Ele

QC SUMMARY REPORT
Drinking Water Metals by EPA Method 200.8

Sample ID MB-16676	SampType: MBLK	Units: µg/L			Prep Date: 4/3/2017	RunNo: 35295					
Client ID: MBLKW	Batch ID: 16676				Analysis Date: 4/3/2017	SeqNo: 675377					
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-16676	SampType: LCS	Units: µg/L			Prep Date: 4/3/2017	RunNo: 35295					
Client ID: LCSW	Batch ID: 16676				Analysis Date: 4/3/2017	SeqNo: 675378					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	98.8	0.500	100.0	0	98.8	85	115				
Lead	55.6	1.00	50.00	0	111	85	115				

Sample ID 1704001-001ADUP	SampType: DUP	Units: µg/L			Prep Date: 4/3/2017	RunNo: 35295					
Client ID: BATCH	Batch ID: 16676				Analysis Date: 4/3/2017	SeqNo: 675380					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	347	0.500						366.4	5.37	30	
Lead	1.90	1.00						2.037	7.05	30	

Sample ID 1704001-001AMS	SampType: MS	Units: µg/L			Prep Date: 4/3/2017	RunNo: 35295					
Client ID: BATCH	Batch ID: 16676				Analysis Date: 4/3/2017	SeqNo: 675381					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	544	0.500	200.0	366.4	88.8	70	130				
Lead	103	1.00	100.0	2.037	101	70	130				

Sample ID 1704001-001AMSD	SampType: MSD	Units: µg/L			Prep Date: 4/3/2017	RunNo: 35295					
Client ID: BATCH	Batch ID: 16676				Analysis Date: 4/3/2017	SeqNo: 675384					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	551	0.500	200.0	366.4	92.5	70	130	544.0	1.35	30	
--------	-----	-------	-------	-------	------	----	-----	-------	------	----	--



Work Order: 1704003
CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water-Amistad Ele

QC SUMMARY REPORT
Drinking Water Metals by EPA Method 200.8

Sample ID 1704001-001AMSD	SampType: MSD	Units: µg/L			Prep Date: 4/3/2017	RunNo: 35295					
Client ID: BATCH	Batch ID: 16676				Analysis Date: 4/3/2017	SeqNo: 675384					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	104	1.00	100.0	2.037	102	70	130	102.8	1.24	30	

Client Name: **FE**

 Work Order Number: **1704003**

 Logged by: **Erica Silva**

 Date Received: **4/3/2017 9:22:00 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
- HNO3
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

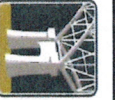
19. Additional remarks:

HNO3 added to 002A, 003A, 005A, 006A, 008A, 009A, 011A, 012A

Item Information

Item #	Temp °C
Cooler	5.4
Sample	1.1

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



Fremont
Analytical

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

Chain of Custody Record and Laboratory Services Agreement

Date: 3/31/2017

Laboratory Project No (Internal):

1704003

Page: 1 of 2

Project Name: Kennick 500 Drinking Water - Amstad Elementary
Project No: 162017.24 Collected by: Amanda Ebyesk
Location: Amstad Elementary, Kennick, WA
Report To (PM): Ryan Mathews
PM Email: mathews@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)*	Analytes																	Comments							
				VOCs (EPA 8260 / 624)	GY/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HClD)	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)	Pb	Sb	Se	Sr		Sn	Ti	U	V	Zn		
1 AEC3117-P-OF-33	3/31/17	0630	DW																									HNO3 preserved; Pb only HOLD; impr.
2 AEC3117- P-OF-33 S-OF-33																												HNO3 preserved; Pb only HOLD; impr.
3 AEC3117-T-CF-33																												HNO3 preserved; Pb only HOLD; impr.
4 AEC3117-P-CF-34																												HNO3 preserved; Pb only HOLD; impr.
5 AEC3117-S-CF-34																												HNO3 preserved; Pb only HOLD; impr.
6 AEC3117-T-CF-34																												HNO3 preserved; Pb only HOLD; impr.
7 AEC3117-P-OF-39																												HNO3 preserved; Pb only HOLD; impr.
8 AEC3117-S-OF-39																												HNO3 preserved; Pb only HOLD; impr.
9 AEC3117-T-OF-39																												HNO3 preserved; Pb only HOLD; impr.
10 AEC3117-P-OF-40																												HNO3 preserved; Pb only HOLD; impr.

Special Remarks:

Please preserve all impr. samples

TAT: ASAP

TAT → SameDay NextDay 2 Day 3 Day STD

*Please coordinate with the lab in advance

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite
 Sample Disposal: Return to Client Disposal by Lab (Samples will be held for 30 days unless otherwise noted. A fee may be assessed if samples are retained after 30 days.)
 Turn-around times for samples received after 4:00pm will begin on the following business day.

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 3/31/2017, 1606 Date/Time
 Received 4/3/17 Date/Time
 Relinquished 3/31/2017, 1606 Date/Time
 Received 4/3/17 Date/Time



Fremont Analytical

Chain of Custody Record and Laboratory Services Agreement

3600 Fremont Ave N.
Seattle, WA 98103

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

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

Project Name: Kennewick 500 Drinking water - Amistad Elementary
Project No: 162017-24
Location: Amistad Elementary, Kennewick, WA
Report To (PM): Ryan Mathews
Mathews@fulcrum.net; cc: aenbysk@fulcrum.net

Date: 3/31/2017

Laboratory Project No (Internal):
Page: 2 of 2

1704003

*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)		Gasoline Range Organics (GX)		Hydrocarbon Identification (HCID)		PAHs (EPA 8270 - SIM)		Metals** (EPA 6020 / 200.8)		Comments
				GY/BTEX	BTEX	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PCBs (EPA 8082 / 608)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)			
1 AE33117-S-0F-40	3/31/17	0630	DW											HNO3 preserved; Pb-Cu
2 AE33117-T-0F-40														
3 AE33117-P-CF-41														
4 AE33117-P-CF-42														
5														
6														
7														
8														
9														
10														

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

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

Sample Disposal: Return to Client Disposal by Lab (Samples will be held for 30 days unless otherwise noted. A fee may be assessed if samples are retained after 30 days)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished Date/Time: 3/31/2017, 1600 Received Date/Time: 4/3/17, 0922

Relinquished Date/Time: Received Date/Time:

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

*Please coordinate with the lab in advance

ATTACHMENT F

Fixture Style Photographs





Sample AE122216-P-CF-33: **15 µg/L** initial lead concentration. Fixture style above is identified producing elevated lead concentrations.



Sample AE122216-P-CF-21: **12 µg/L** initial lead concentration. Same fixture style as initial samples with elevated lead concentrations.