



**Fulcrum Environmental**

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

**RE: Kennewick School District - Vista Elementary Drinking Water Sa  
Work Order Number: 1702134**

February 14, 2017

**Attention Ryan Mathews:**

Fremont Analytical, Inc. received 6 sample(s) on 2/13/2017 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: 02/14/2017

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**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick School District - Vista Elementar  
**Work Order:** 1702134

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## Work Order Sample Summary

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Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1702134-001	21117-VE-P-CF-34	02/11/2017 8:50 AM	02/13/2017 9:41 AM
1702134-002	21117-VE-S-CF-34	02/11/2017 8:50 AM	02/13/2017 9:41 AM
1702134-003	21117-VE-T-CF-34	02/11/2017 8:50 AM	02/13/2017 9:41 AM
1702134-004	21117-VE-P-CDF-35	02/11/2017 8:50 AM	02/13/2017 9:41 AM
1702134-005	21117-VE-P-BF-39	02/11/2017 8:50 AM	02/13/2017 9:41 AM
1702134-006	21117-VE-P-BF-40	02/11/2017 8:50 AM	02/13/2017 9:41 AM

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**CLIENT:** Fulcrum Environmental

**Project:** Kennewick School District - Vista Elementary Drinking Water Sampling

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WorkOrder Narrative:

**I. SAMPLE RECEIPT:**

Samples receipt information is recorded on the attached Sample Receipt Checklist.

**II. GENERAL REPORTING COMMENTS:**

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

**III. ANALYSES AND EXCEPTIONS:**

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

**Prep Sample Comments:**

1702134-001A 206634: Prep Comments for EPA200.8, Sample 1702134-001A: Turbidity: 0.01 NTU

1702134-004A 206635: Prep Comments for EPA200.8, Sample 1702134-004A: Turbidity: 0.31 NTU

1702134-005A 206636: Prep Comments for EPA200.8, Sample 1702134-005A: Turbidity: 0.19 NTU

1702134-006A 206637: Prep Comments for EPA200.8, Sample 1702134-006A: Turbidity: 0.22 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 School District - Vista Elementary Drinking Water Sampling

**Lab ID:** 1702134-001

**Collection Date:** 2/11/2017 8:50:00 AM

**Client Sample ID:** 21117-VE-P-CF-34

**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: 16209

Analyst: TN

Copper	655	0.500		µg/L	1	2/13/2017 6:28:38 PM
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**Lab ID:** 1702134-004

**Collection Date:** 2/11/2017 8:50:00 AM

**Client Sample ID:** 21117-VE-P-CDF-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: 16209

Analyst: TN

Copper	802	0.500		µg/L	1	2/13/2017 6:32:14 PM
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**Lab ID:** 1702134-005

**Collection Date:** 2/11/2017 8:50:00 AM

**Client Sample ID:** 21117-VE-P-BF-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: 16209

Analyst: TN

Copper	1.15	0.500		µg/L	1	2/13/2017 6:35:51 PM
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**CLIENT:** Fulcrum Environmental

**Project:** Kennewick School District - Vista Elementary Drinking Water Sampling

**Lab ID:** 1702134-006

**Collection Date:** 2/11/2017 8:50:00 AM

**Client Sample ID:** 21117-VE-P-BF-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: 16209

Analyst: TN

Copper	1,210	0.500		µg/L	1	2/13/2017 6:46:42 PM
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**Work Order:** 1702134  
**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick School District - Vista Elementar

**QC SUMMARY REPORT**  
**Drinking Water Metals by EPA Method 200.8**

Sample ID <b>MB-16209</b>	SampType: <b>MBLK</b>	Units: <b>µg/L</b>	Prep Date: <b>2/13/2017</b>	RunNo: <b>34433</b>							
Client ID: <b>MBLKW</b>	Batch ID: <b>16209</b>	Analysis Date: <b>2/13/2017</b>	SeqNo: <b>657246</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper ND 0.500

Sample ID <b>LCS-16209</b>	SampType: <b>LCS</b>	Units: <b>µg/L</b>	Prep Date: <b>2/13/2017</b>	RunNo: <b>34433</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>16209</b>	Analysis Date: <b>2/13/2017</b>	SeqNo: <b>657247</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 92.0 0.500 100.0 0 92.0 85 115

Sample ID <b>1702133-004ADUP</b>	SampType: <b>DUP</b>	Units: <b>µg/L</b>	Prep Date: <b>2/13/2017</b>	RunNo: <b>34433</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>16209</b>	Analysis Date: <b>2/13/2017</b>	SeqNo: <b>657249</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper ND 0.500 0 30

Sample ID <b>1702133-004AMS</b>	SampType: <b>MS</b>	Units: <b>µg/L</b>	Prep Date: <b>2/13/2017</b>	RunNo: <b>34433</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>16209</b>	Analysis Date: <b>2/13/2017</b>	SeqNo: <b>657250</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 186 0.500 200.0 0 93.1 70 130

Sample ID <b>1702133-004AMSD</b>	SampType: <b>MSD</b>	Units: <b>µg/L</b>	Prep Date: <b>2/13/2017</b>	RunNo: <b>34433</b>							
Client ID: <b>BATCH</b>	Batch ID: <b>16209</b>	Analysis Date: <b>2/13/2017</b>	SeqNo: <b>657251</b>								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 189 0.500 200.0 0 94.4 70 130 186.2 1.37 30

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

Work Order Number: **1702134**  
 Date Received: **2/13/2017 9:41:00 AM**

### Chain of Custody

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

### Log In

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

### Special Handling (if applicable)

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

Person Notified:	<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:

### Item Information

Item #	Temp °C
Cooler	7.5
Sample	1.0

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





3600 Fremont Ave N.  
Seattle, WA 98103

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

# Chain of Custody Record and Laboratory Services Agreement

Date: 2/11/2017

Laboratory Project No (Internal):

1702134

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

Project Name: Kennewick School District - Vista Elementary Drinking Water Sampling  
Project No: 162017.12  
Location: Vista Elementary, Kennewick, WA  
Report To (PM): Ryan Mathews  
PM Email: rmathews@efulcrum.net; cc: aenbysk@efulcrum.net

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

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GV/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCD)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 - SIM)	PAHs (EPA 8270 / 625)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T)   Dissolved (D)	Anions (IC)**	EDB (8011)	Comments
21117-VE-P-CF-34	2/11/2017	0850	DW														HNO3 preserved
21117-VE-S-CF-34	2/11/2017		DW														HCD; unpreserved
21117-VE-T-CF-34	2/11/2017		DW														↓
21117-VE-P-CDF-35	2/11/2017		DW														HNO3 preserved
21117-VE-P-BF-39	2/11/2017		DW														↓
21117-VE-P-BF-40	2/11/2017		DW														↓

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

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

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

Relinquished  Date/Time: 2/11/2017, 11:00am Received  Date/Time: 2/13/17 0914  
Relinquished  Date/Time: Received  Date/Time: