



**Fulcrum Environmental**

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

**RE: Kennewick SD Drinking Water - Eastgate Elementary**  
**Work Order Number: 1703044**

March 13, 2017

**Attention Ryan Mathews:**

Fremont Analytical, Inc. received 14 sample(s) on 3/6/2017 for the analyses presented in the following report.

***Drinking Water Metals by EPA Method 200.8***

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward  
Project Manager



Date: 03/13/2017

**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Eastgate El  
**Work Order:** 1703044

## Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1703044-001	EGE3417-P-CF-07	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-002	EGE3417-P-NF-12	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-003	EGE3417-S-NF-12	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-004	EGE3417-T-NF-12	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-005	EGE3417-P-OF-15	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-006	EGE3417-P-CF-19	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-007	EGE3417-P-CF-20	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-008	EGE3417-S-CF-20	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-009	EGE3417-T-CF-20	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-010	EGE3417-P-OF-24	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-011	EGE3417-S-OF-24	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-012	EGE3417-T-OF-24	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-013	EGE3417-P-CF-34	03/04/2017 7:00 AM	03/06/2017 8:54 AM
1703044-014	EGE3417-P-CF-35	03/04/2017 7:00 AM	03/06/2017 8:54 AM

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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:

1703044-001A 209766: Prep Comments for EPA200.8, Sample 1703044-001A: Turbidity: 0.12 NTU  
1703044-002A 209797: Prep Comments for EPA200.8, Sample 1703044-002A: Turbidity: 0.01 NTU  
1703044-005A 209798: Prep Comments for EPA200.8, Sample 1703044-005A: Turbidity: 0.08 NTU  
1703044-006A 209799: Prep Comments for EPA200.8, Sample 1703044-006A: Turbidity: 0.04 NTU  
1703044-007A 209800: Prep Comments for EPA200.8, Sample 1703044-007A: Turbidity: 0.00 NTU  
1703044-010A 209801: Prep Comments for EPA200.8, Sample 1703044-010A: Turbidity: 0.02 NTU  
1703044-013A 209802: Prep Comments for EPA200.8, Sample 1703044-013A: Turbidity: 0.00 NTU  
1703044-014A 209803: Prep Comments for EPA200.8, Sample 1703044-014A: Turbidity: 0.00 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 - Eastgate Elementary

**Lab ID:** 1703044-001      **Collection Date:** 3/4/2017 7:00:00 AM  
**Client Sample ID:** EGE3417-P-CF-07      **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: 16429      Analyst: TN

Copper	837	0.500		µg/L	1	3/10/2017 7:41:49 PM
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**Lab ID:** 1703044-002      **Collection Date:** 3/4/2017 7:00:00 AM  
**Client Sample ID:** EGE3417-P-NF-12      **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: 16429      Analyst: TN

Copper	1,350	0.500		µg/L	1	3/10/2017 7:45:51 PM
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**Lab ID:** 1703044-005      **Collection Date:** 3/4/2017 7:00:00 AM  
**Client Sample ID:** EGE3417-P-OF-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: 16429      Analyst: TN

Copper	1,270	0.500		µg/L	1	3/10/2017 7:49:53 PM
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**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Eastgate Elementary

**Lab ID:** 1703044-006      **Collection Date:** 3/4/2017 7:00:00 AM  
**Client Sample ID:** EGE3417-P-CF-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: 16429      Analyst: TN

Copper	1,300	0.500		µg/L	1	3/10/2017 7:53:54 PM
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**Lab ID:** 1703044-007      **Collection Date:** 3/4/2017 7:00:00 AM  
**Client Sample ID:** EGE3417-P-CF-20      **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: 16429      Analyst: TN

Copper	1,280	0.500		µg/L	1	3/10/2017 8:06:01 PM
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**Lab ID:** 1703044-010      **Collection Date:** 3/4/2017 7:00:00 AM  
**Client Sample ID:** EGE3417-P-OF-24      **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: 16429      Analyst: TN

Copper	1,650	0.500		µg/L	1	3/10/2017 8:10:03 PM
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**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Eastgate Elementary

**Lab ID:** 1703044-013      **Collection Date:** 3/4/2017 7:00:00 AM  
**Client Sample ID:** EGE3417-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: 16429      Analyst: TN

Copper	ND	0.500		µg/L	1	3/10/2017 8:14:05 PM
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**Lab ID:** 1703044-014      **Collection Date:** 3/4/2017 7:00:00 AM  
**Client Sample ID:** EGE3417-P-CF-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: 16429      Analyst: TN

Copper	1,220	0.500		µg/L	1	3/10/2017 8:18:07 PM
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**Work Order:** 1703044  
**CLIENT:** Fulcrum Environmental  
**Project:** Kennewick SD Drinking Water - Eastgate EI

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

Sample ID <b>MB-16429</b>	SampType: <b>MBLK</b>	Units: <b>µg/L</b>			Prep Date: <b>3/6/2017</b>	RunNo: <b>34876</b>					
Client ID: <b>MBLKW</b>	Batch ID: <b>16429</b>				Analysis Date: <b>3/10/2017</b>	SeqNo: <b>665941</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-16429</b>	SampType: <b>LCS</b>	Units: <b>µg/L</b>			Prep Date: <b>3/6/2017</b>	RunNo: <b>34876</b>					
Client ID: <b>LCSW</b>	Batch ID: <b>16429</b>				Analysis Date: <b>3/10/2017</b>	SeqNo: <b>665944</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 89.6 0.500 100.0 0 89.6 85 115

Sample ID <b>1703042-001ADUP</b>	SampType: <b>DUP</b>	Units: <b>µg/L</b>			Prep Date: <b>3/6/2017</b>	RunNo: <b>34876</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>16429</b>				Analysis Date: <b>3/10/2017</b>	SeqNo: <b>665946</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 962 0.500 990.4 2.93 30

Sample ID <b>1703042-001AMS</b>	SampType: <b>MS</b>	Units: <b>µg/L</b>			Prep Date: <b>3/6/2017</b>	RunNo: <b>34876</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>16429</b>				Analysis Date: <b>3/10/2017</b>	SeqNo: <b>665947</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 1,170 0.500 200.0 990.4 89.8 70 130

Sample ID <b>1703042-001AMSD</b>	SampType: <b>MSD</b>	Units: <b>µg/L</b>			Prep Date: <b>3/6/2017</b>	RunNo: <b>34876</b>					
Client ID: <b>BATCH</b>	Batch ID: <b>16429</b>				Analysis Date: <b>3/10/2017</b>	SeqNo: <b>665948</b>					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper 1,110 0.500 200.0 990.4 59.2 70 130 1,170 5.37 30 S

**NOTES:**

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











