



Fremont
Analytical

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Fulcrum Environmental

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

RE: Kennewick School District - Administration Drinking Water Sam
Work Order Number: 1702135

February 14, 2017

Attention Ryan Mathews:

Fremont Analytical, Inc. received 14 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

DoD/ELAP Certification #L2371, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

Original

www.fremontanalytical.com

CLIENT: Fulcrum Environmental
Project: Kennewick School District - Administration
Work Order: 1702135

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1702135-001	ADM21117-P-OF-01	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-002	ADM21117-S-OF-01	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-003	ADM21117-T-OF-01	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-004	ADM21117-P-OF-02	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-005	ADM21117-S-OF-02	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-006	ADM21117-T-OF-02	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-007	ADM21117-P-WC-09	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-008	ADM21117-S-WC-09	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-009	ADM21117-T-WC-09	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-010	ADM21117-P-WC-10	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-011	ADM21117-S-WC-10	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-012	ADM21117-T-WC-10	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-013	ADM21117-P-WC-12	02/11/2017 10:00 AM	02/13/2017 9:05 AM
1702135-014	ADM21117-P-WC-13	02/11/2017 10:00 AM	02/13/2017 9:05 AM

CLIENT: Fulcrum Environmental**Project:** Kennewick School District - Administration Drinking Water Sampling

WorkOrder Narrative:

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

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

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

III. ANALYSES AND EXCEPTIONS:

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

Prep Sample Comments:

1702135-001A 206638: Prep Comments for EPA200.8, Sample 1702135-001A: Turbidity: 0.35 NTU
1702135-004A 206639: Prep Comments for EPA200.8, Sample 1702135-004A: Turbidity: 0.34 NTU
1702135-007A 206640: Prep Comments for EPA200.8, Sample 1702135-007A: Turbidity: 0.01 NTU
1702135-010A 206641: Prep Comments for EPA200.8, Sample 1702135-010A: Turbidity: 0.27 NTU
1702135-013A 206642: Prep Comments for EPA200.8, Sample 1702135-013A: Turbidity: 0.09 NTU
1702135-014A 206643: Prep Comments for EPA200.8, Sample 1702135-014A: Turbidity: 0.19 NTU

Qualifiers:

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

Acronyms:

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



Analytical Report

Work Order: 1702135
Date Reported: 2/14/2017

CLIENT: Fulcrum Environmental

Project: Kennewick School District - Administration Drinking Water Sampling

Lab ID: 1702135-001

Client Sample ID: ADM21117-P-OF-01

Collection Date: 2/11/2017 10:00:00 AM

Matrix: Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Drinking Water Metals by EPA Method 200.8

Batch ID: 16209

Analyst: TN

Copper	908	0.500		µg/L	1	2/13/2017 6:50:19 PM
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Lab ID: 1702135-004

Client Sample ID: ADM21117-P-OF-02

Collection Date: 2/11/2017 10:00:00 AM

Matrix: Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Drinking Water Metals by EPA Method 200.8

Batch ID: 16209

Analyst: TN

Copper	1,120	0.500		µg/L	1	2/13/2017 6:53:55 PM
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Lab ID: 1702135-007

Client Sample ID: ADM21117-P-WC-09

Collection Date: 2/11/2017 10:00:00 AM

Matrix: Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Drinking Water Metals by EPA Method 200.8

Batch ID: 16209

Analyst: TN

Copper	406	0.500		µg/L	1	2/13/2017 6:57:31 PM
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Analytical Report

Work Order: 1702135
Date Reported: 2/14/2017

CLIENT: Fulcrum Environmental

Project: Kennewick School District - Administration Drinking Water Sampling

Lab ID: 1702135-010

Client Sample ID: ADM21117-P-WC-10

Collection Date: 2/11/2017 10:00:00 AM

Matrix: Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Drinking Water Metals by EPA Method 200.8

Batch ID: 16209

Analyst: TN

Copper	341	0.500		µg/L	1	2/13/2017 7:01:07 PM
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Lab ID: 1702135-013

Client Sample ID: ADM21117-P-WC-12

Collection Date: 2/11/2017 10:00:00 AM

Matrix: Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Drinking Water Metals by EPA Method 200.8

Batch ID: 16209

Analyst: TN

Copper	1,260	0.500		µg/L	1	2/13/2017 7:04:44 PM
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Lab ID: 1702135-014

Client Sample ID: ADM21117-P-WC-13

Collection Date: 2/11/2017 10:00:00 AM

Matrix: Drinking Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Drinking Water Metals by EPA Method 200.8

Batch ID: 16209

Analyst: TN

Copper	ND	0.500		µg/L	1	2/13/2017 7:08:20 PM
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Work Order: 1702135
CLIENT: Fulcrum Environmental
Project: Kennewick School District - Administration

QC SUMMARY REPORT

Drinking Water Metals by EPA Method 200.8

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

Copper	ND	0.500									
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Sample ID	LCS-16209	SampType: LCS			Units: µg/L		Prep Date: 2/13/2017			RunNo: 34433		
Client ID:	LCSW	Batch ID: 16209			Analysis Date: 2/13/2017			SeqNo: 657247				
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				
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Sample ID	1702133-004ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	2/13/2017	RunNo:	34433		
Client ID:	BATCH	Batch ID:	16209			Analysis Date:	2/13/2017	SeqNo:	657249		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Copper	ND	0.500						0		30	
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Sample ID	1702133-004AMS	SampType:	MS	Units:	µg/L	Prep Date:	2/13/2017	RunNo:	34433		
Client ID:	BATCH	Batch ID:	16209	Analysis Date:				2/13/2017	SeqNo:	657250	
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				
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Sample ID	1702133-004AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	2/13/2017	RunNo:	34433		
Client ID:	BATCH	Batch ID:	16209			Analysis Date:	2/13/2017	SeqNo:	657251		
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	
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Client Name: **FE**
 Logged by: **Erica Silva**

Work Order Number: **1702135**
 Date Received: **2/13/2017 9:05:00 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, 005A, 006A, 008A, 009A
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

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

Person Notified: Date
 By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding:
 Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	6.3
Sample	6.7

* 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

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 - Administration Drinking Water Sampling

Project No:

162017.14

Location:

Administration Building, Kennewick, WA

Report To (PM):

Ryan Matthews

PM Email:

rmathews@fulcrum.net; cc: aenbysk@fulcrum.net

Date: 2/11/2017

Laboratory Project No (Internal):

1702135

Page: 1 of 2

Chain of Custody Record and Laboratory Services Agreement

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

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	Comments	
ADM21117-P-OF-01	2/11/2017	1000	DW														H2O3 preserved	
ADM21117-S-OF-01	2/11/2017		DW														H2O; unpreserved	
ADM21117-T-OF-01	2/11/2017		DW														↓	
ADM21117-P-OF-02	2/11/2017		DW														H2O3 preserved	
ADM21117-S-OF-02	2/11/2017		DW														H2O; unpreserved	
ADM21117-T-OF-02	2/11/2017		DW														↓	
ADM21117-P-WC-09	2/11/2017		DW														H2O3 preserved	
ADM21117-S-WC-09	2/11/2017		DW														H2O; unpreserved	
ADM21117-T-WC-09	2/11/2017		DW														↓	
ADM21117-P-WC-10	2/11/2017		DW														H2O3 preserved	
**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Pb 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: <input type="checkbox"/> Return to Client <input type="checkbox"/> 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	Date/Time		Received															
x	2/11/2017, 1050a		x														TAT: ASAP	
Relinquished	Date/Time		Received															
x	2/13/17 0905		x														TAT → SameDay^ NextDay^ 2 Day 3 Day STD	
*Please coordinate with the lab in advance																		

Please preserve all unpreserved samples



Fremont
Analytical

3600 Fremont Ave N.
Seattle, WA 98103

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

Client: Fulcrum Environmental Consulting

Address: 406 North Second Street

City, State, Zip: Yakima, WA 98901

Telephone: 509.574.0839

Fax: 509.545.8453

Project Name:

Kennewick School District - Administration Drinking Water Sampling

Project No:

162017.14

Location:

Administration Building, Kennewick, WA

Report To (PM):

Ryan Matthews

PM Email:

rmatthews@fulcrum.net; cc: aenbysk@fulcrum.net

Date: 2/11/2017

Laboratory Project No (Internal):

1702135

Page: 12 of 2

Collected by: Amanda Enyok + Mike Beckman

Chain of Custody Record and Laboratory Services Agreement

Page 10 of 10

*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 Type (Matrix)*	VOCS (EPA 8260 / 624)	GV/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)**	EDB (8014)	Comments
ADM2117-S-WC-10	2/11/2017	DW														HAD, improved
ADM2117-T-WC-10	2/11/2017	DW														↓
ADM2117-P-WC-12	2/11/2017	DW														HNO ₃ preserved
ADM2117-P-WC-13	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 U V Zn																
***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite																
Sample Disposal: <input type="checkbox"/> Return to Client <input type="checkbox"/> 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	Received														
x	2/14/17, 10:00a	x	2/13/17 0905													
Relinquished	Date/Time	Received														
x		x														

Special Remarks:

see page 1

TAT → SameDay[^] NextDay[^] 2 Day 3 Day STD

[^]Please coordinate with the lab in advance