



Fremont
Analytical

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Fulcrum Environmental

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

RE: Kennewick SD Drinking Water-Fruitland Building
Work Order Number: 1704002

April 03, 2017

Attention Ryan Mathews:

Fremont Analytical, Inc. received 5 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

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

CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water-Fruitland Buil
Work Order: 1704002

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1704002-001	FLB33117-P-OF-12	03/31/2017 7:00 AM	04/03/2017 9:22 AM
1704002-002	FLB33117-S-OF-12	03/31/2017 7:00 AM	04/03/2017 9:22 AM
1704002-003	FLB33117-T-OF-12	03/31/2017 7:00 AM	04/03/2017 9:22 AM
1704002-004	FLB33117-P-CF-16	03/31/2017 7:00 AM	04/03/2017 9:22 AM
1704002-005	FLB33117-P-CF-17	03/31/2017 7:00 AM	04/03/2017 9:22 AM

CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water-Fruitland Building

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:

1704002-001A 213709: Prep Comments for EPA200.8, Sample 1704002-001A: Turbidity: 0.05 NTU

1704002-004A 213710: Prep Comments for EPA200.8, Sample 1704002-004A: Turbidity: 0.00 NTU

1704002-005A 213711: Prep Comments for EPA200.8, Sample 1704002-005A: Turbidity: 0.06 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



Work Order: 1704002

Date Reported: 4/3/2017

CLIENT: Fulcrum Environmental

Project: Kennewick SD Drinking Water-Fruitland Building

Lab ID: 1704002-001

Client Sample ID: FLB33117-P-OF-12

Collection Date: 3/31/2017 7:00:00 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: 16676

Analyst: TN

Lead	2.53	1.00		µg/L	1	4/3/2017 1:47:42 PM
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Lab ID: 1704002-004

Client Sample ID: FLB33117-P-CF-16

Collection Date: 3/31/2017 7:00:00 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: 16676

Analyst: TN

Lead	ND	1.00		µg/L	1	4/3/2017 1:51:44 PM
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Lab ID: 1704002-005

Client Sample ID: FLB33117-P-CF-17

Collection Date: 3/31/2017 7:00:00 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: 16676

Analyst: TN

Lead	16.1	1.00		µg/L	1	4/3/2017 1:55:45 PM
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Work Order: 1704002
CLIENT: Fulcrum Environmental
Project: Kennewick SD Drinking Water-Fruitland Buil

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	
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	
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	
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	
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	
Lead		104	1.00	100.0	2.037	102	70	130	102.8	1.24	30		



Sample Log-In Check List

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

Work Order Number: **1704002**
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 $>0^{\circ}\text{C}$ 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: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp $^{\circ}\text{C}$
Cooler	5.4
Sample	1.1

* 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: 509.575.8453

PM Email:

rmathews@efulcru.com; cc: aenbysk@efulcru.com.net

Project Name:

Kennex 50 Drinking water - Fruitland Building

Project No:

Collected by: Amanda Enbysk

Location:

Fruitland Building, Llewellyn, 134

Report To (PM):

Ryan Mathews

*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

[illegible]