



10/31/2016

Work Order: 16J0672
Project: [none]

Environmental Contractors, Inc
Attn: Alan Jenkins
931 East 800 North
Mapleton, UT 84664

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.



Approved By:

Mark Broadhead, Project Manager



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Certificate of Analysis

Environmental Contractors, Inc
Alan Jenkins
931 East 800 North
Mapleton, UT 84664

PO#: _____
Receipt: 10/17/16 14:00 @ 12.3 °C
Date Reported: 10/31/2016
Project Name: [none]

Sample ID: Composite AF Weir

Matrix: Solid

Date Sampled: 10/17/16 11:48

Sampled By: Alan Jenkins

Lab ID: 16J0672-1

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Total Solids	54.6	%	0.1	SM 2540G	10/17/16	10/18/16	
Metals							
Arsenic, Total	28.4	mg/kg dry	3.72	EPA 6010B/3050B	10/20/16	10/20/16	
Barium, Total	133	mg/kg dry	0.186	EPA 6010B/3050B	10/20/16	10/20/16	
Cadmium, Total	4.49	mg/kg dry	0.186	EPA 6010B/3050B	10/20/16	10/20/16	
Chromium, Total	14.7	mg/kg dry	0.186	EPA 6010B/3050B	10/20/16	10/20/16	
Lead, Total	301	mg/kg dry	1.86	EPA 6010B/3050B	10/20/16	10/20/16	
Mercury, Total	0.34	mg/kg dry	0.02	EPA 7471A	10/20/16	10/20/16	
Selenium, Total	8.84	mg/kg dry	1.86	EPA 6010B/3050B	10/20/16	10/20/16	
Silver, Total	1.13	mg/kg dry	0.186	EPA 6010B/3050B	10/20/16	10/20/16	



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PO#:
Receipt: 10/17/16 14:00 @ 12.3 °C
Date Reported: 10/31/2016
Project Name: [none]

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).

1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.

1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.

1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.

EMTECH - FORD ANALYTICAL LABORATORY

CHAIN OF CUSTODY

29



CHEMTECH-FORD LABORATORIES

PANY: Environmental Contractors Inc.
 ADDRESS: 931 E. 800 N.
 STATE/CITY/ZIP: Wapitan, UT 84616
 PHONE #: _____ FAX: _____
 CONTACT: Alan Jenkins PROJECT: _____
 EMAIL: alane@eci-solutions.com

BILLING ADDRESS: _____
 BILLING CITY/STATE/ZIP: _____
 PURCHASE ORDER #: _____
 INVOICE EMAIL ADDRESS: _____

TURNAROUND REQUIRED: * _____
 * Expedited turnaround subject to additional charge

Use Only	CLIENT SAMPLE INFORMATION				
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	Field: Residual Chlorine
1612 01	1. Composite AF Near	10-17-16	11:48	Solid	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

PCRA & metals	TESTS REQUESTED													Bacteria				
															Total Coliform + E. coli (Present/Absent)	Total Coliform + E. coli (Enumerated)	HPC (Plate Count)	E. Coli Only
✓																		

Sampled by: [print] Alan K. Jenkins Sampled by: [signature] _____

Special Instructions: _____

ON ICE NOT ON ICE Temp (C): 12.3

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Relinquished by: [signature] <u>Alan K. Jenkins</u>	Date/Time <u>10-17-16 14:00</u>	Received by: [signature] _____	Date/Time <u>10/17/16 14:00</u>
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time

CHEMTECH-FORD 801.262.7299 PHONE
 9632 South 500 West 866.792.0093 FAX
 Sandy, UT 84070 www.chemtechford.com

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.

Work Order # J0672

CHEMTECH FORD LABORATORIES
Sample Receipt



CHEMTECH-FORD
LABORATORIES

- Delivery Method:**
- UPS
 - USPS
 - FedEx
 - Chemtech Courier
 - Walk-in
 - Customer Courier

Receiving Temperature 12.3 °C

Sample #	Container	Chemtech Lot # or Preservative	Number of Subsamples	Preserved by Client/Third Party	Preserved in Receiving/Laboratory	Filtered in Field by Client	Misc Volume (oz/mL)	Comments
01	JB RG						402	Clear

Sample Condition (check if yes)
<input type="checkbox"/> Custody Seals
<input checked="" type="checkbox"/> Containers Intact
<input checked="" type="checkbox"/> COC/Labels Agree
<input checked="" type="checkbox"/> Preservation Confirmed
<input type="checkbox"/> Received on Ice
<input checked="" type="checkbox"/> Correct Container(s)
<input checked="" type="checkbox"/> Sufficient Sample Volume
<input type="checkbox"/> Headspace Present (VOC)
<input type="checkbox"/> Temperature Blank
<input checked="" type="checkbox"/> Received within Holding Time

- Plastic Containers**
- A- Plastic Unpreserved
 - B- Miscellaneous Plastic
 - C- Cyanide Qt (NaOH)
 - E- Coliform/Ecoli/HPC
 - F- Sulfide Qt (Zn Acetate)
 - L- Mercury 1631
 - M- Metals Pint (HNO3)
 - N- Nutrient Pint (H2SO4)
 - R- Radiological (HNO3)
 - S- Sludge Cups/Tubs
 - Q- Plastic Bag

- Glass Containers**
- D- 625 (Na2S2O3)
 - G- Glass Unpreserved
 - H- HAAs (NH4Cl)
 - J- 508/515/525 (Na2SO3)
 - K- 515.3 Herbicides
 - O- Oil & Grease (HCl)
 - P- Phenols (H2SO4)
 - T- TOC/TOX (H3PO4)
 - U- 531 (MCAA, Na2S2O3)
 - V- 524/THMs (Ascorbic Acid)
 - W- 8260 VOC (1:1 HCl)
 - X- Vial Unpreserved
 - Y- 624/504 (Na2S2O3)
 - Z- Miscellaneous Glass



11/10/2016

Work Order: 16J1179
Project: Tibble Fork

Environmental Contractors, Inc
Attn: Alan Jenkins
931 East 800 North
Mapleton, UT 84664

Client Service Contact: 801.262.7299

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Approved By:

Mark Broadhead, Project Manager



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Certificate of Analysis

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Mapleton, UT 84664

PO#:
Receipt: 10/28/16 13:06 @ 19.8 °C
Date Reported: 11/10/2016
Project Name: Tibble Fork

Sample ID: H-1

Matrix: Solid

Date Sampled: 10/24/16 7:40

Sampled By: Alan Jenkins

Lab ID: 16J1179-1

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Total Solids	46.0	%	0.1	SM 2540G	10/31/16	10/31/16	
Metals							
Arsenic, Total	32.9	mg/kg dry	11.0	EPA 6010B/3050B	11/2/16	11/3/16	
Barium, Total	154	mg/kg dry	0.549	EPA 6010B/3050B	11/2/16	11/3/16	
Cadmium, Total	5.76	mg/kg dry	0.549	EPA 6010B/3050B	11/2/16	11/3/16	
Chromium, Total	21.1	mg/kg dry	0.549	EPA 6010B/3050B	11/2/16	11/3/16	
Lead, Total	406	mg/kg dry	5.49	EPA 6010B/3050B	11/2/16	11/3/16	
Mercury, Total	0.37	mg/kg dry	0.02	EPA 7471A	11/2/16	11/2/16	
Selenium, Total	10.5	mg/kg dry	5.49	EPA 6010B/3050B	11/2/16	11/3/16	
Silver, Total	1.16	mg/kg dry	0.549	EPA 6010B/3050B	11/2/16	11/3/16	



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PO#:
Receipt: 10/28/16 13:06 @ 19.8 °C
Date Reported: 11/10/2016
Project Name: Tibble Fork

Sample ID: H-2

Matrix: Solid

Date Sampled: 10/24/16 7:50

Sampled By: Alan Jenkins

Lab ID: 16J1179-

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Total Solids	50.3	%	0.1	SM 2540G	10/31/16	10/31/16	
Metals							
Arsenic, Total	32.9	mg/kg dry	9.14	EPA 6010B/3050B	11/2/16	11/3/16	
Barium, Total	148	mg/kg dry	0.457	EPA 6010B/3050B	11/2/16	11/3/16	
Cadmium, Total	5.70	mg/kg dry	0.457	EPA 6010B/3050B	11/2/16	11/3/16	
Chromium, Total	20.0	mg/kg dry	0.457	EPA 6010B/3050B	11/2/16	11/3/16	
Lead, Total	400	mg/kg dry	4.57	EPA 6010B/3050B	11/2/16	11/3/16	
Mercury, Total	0.39	mg/kg dry	0.02	EPA 7471A	11/2/16	11/2/16	
Selenium, Total	10.1	mg/kg dry	4.57	EPA 6010B/3050B	11/2/16	11/3/16	
Silver, Total	1.22	mg/kg dry	0.457	EPA 6010B/3050B	11/2/16	11/3/16	



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PO#: _____
Receipt: 10/28/16 13:06 @ 19.8 °C
Date Reported: 11/10/2016
Project Name: Tibble Fork

Sample ID: H-3

Matrix: Solid

Date Sampled: 10/24/16 7:59

Sampled By: Alan Jenkins

Lab ID: 16J1179-0

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Total Solids	41.6	%	0.1	SM 2540G	10/31/16	10/31/16	
Metals							
Arsenic, Total	50.2	mg/kg dry	11.5	EPA 6010B/3050B	11/2/16	11/3/16	
Barium, Total	174	mg/kg dry	0.574	EPA 6010B/3050B	11/2/16	11/3/16	
Cadmium, Total	9.02	mg/kg dry	0.574	EPA 6010B/3050B	11/2/16	11/3/16	
Chromium, Total	25.8	mg/kg dry	0.574	EPA 6010B/3050B	11/2/16	11/3/16	
Lead, Total	652	mg/kg dry	5.74	EPA 6010B/3050B	11/2/16	11/3/16	
Mercury, Total	0.63	mg/kg dry	0.02	EPA 7471A	11/2/16	11/2/16	
Selenium, Total	13.0	mg/kg dry	5.74	EPA 6010B/3050B	11/2/16	11/3/16	
Silver, Total	2.29	mg/kg dry	0.574	EPA 6010B/3050B	11/2/16	11/3/16	



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PO#: _____
Receipt: 10/28/16 13:06 @ 19.8 °C
Date Reported: 11/10/2016
Project Name: Tibble Fork

Sample ID: H-4

Matrix: Solid

Date Sampled: 10/24/16 8:10

Sampled By: Alan Jenkins

Lab ID: 16J1179-1

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Total Solids	48.4	%	0.1	SM 2540G	10/31/16	10/31/16	
Metals							
Arsenic, Total	34.4	mg/kg dry	11.2	EPA 6010B/3050B	11/2/16	11/3/16	
Barium, Total	159	mg/kg dry	0.559	EPA 6010B/3050B	11/2/16	11/3/16	
Cadmium, Total	5.60	mg/kg dry	0.559	EPA 6010B/3050B	11/2/16	11/3/16	
Chromium, Total	22.7	mg/kg dry	0.559	EPA 6010B/3050B	11/2/16	11/3/16	
Lead, Total	392	mg/kg dry	5.59	EPA 6010B/3050B	11/2/16	11/3/16	
Mercury, Total	0.38	mg/kg dry	0.01	EPA 7471A	11/2/16	11/2/16	
Selenium, Total	12.0	mg/kg dry	5.59	EPA 6010B/3050B	11/2/16	11/3/16	
Silver, Total	1.05	mg/kg dry	0.559	EPA 6010B/3050B	11/2/16	11/3/16	



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PO#: _____
Receipt: 10/28/16 13:06 @ 19.8 °C
Date Reported: 11/10/2016
Project Name: **Tibble Fork**

Sample ID: **H-5**

Matrix: **Solid**

Date Sampled: **10/24/16 8:14**

Sampled By: **Alan Jenkins**

Lab ID: **16J1179-1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Total Solids	49.1	%	0.1	SM 2540G	10/31/16	10/31/16	
Metals							
Arsenic, Total	20.0	mg/kg dry	11.4	EPA 6010B/3050B	11/2/16	11/3/16	
Barium, Total	108	mg/kg dry	0.570	EPA 6010B/3050B	11/2/16	11/3/16	
Cadmium, Total	3.31	mg/kg dry	0.570	EPA 6010B/3050B	11/2/16	11/3/16	
Chromium, Total	17.1	mg/kg dry	0.570	EPA 6010B/3050B	11/2/16	11/3/16	
Lead, Total	157	mg/kg dry	5.70	EPA 6010B/3050B	11/2/16	11/3/16	
Mercury, Total	0.13	mg/kg dry	0.02	EPA 7471A	11/2/16	11/2/16	
Selenium, Total	7.78	mg/kg dry	5.70	EPA 6010B/3050B	11/2/16	11/3/16	
Silver, Total	0.559	mg/kg dry	0.570	EPA 6010B/3050B	11/2/16	11/3/16	J



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PO#:
 Receipt: 10/28/16 13:06 @ 19.8 °C
 Date Reported: 11/10/2016
 Project Name: Tibble Fork

Sample ID: AF-1

Matrix: Solid

Date Sampled: 10/24/16 8:45

Sampled By: Alan Jenkins

Lab ID: 16J1179-1

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Total Solids	61.5	%	0.1	SM 2540G	10/31/16	10/31/16	
Metals							
Arsenic, Total	25.9	mg/kg dry	10.3	EPA 6010B/3050B	11/2/16	11/3/16	
Barium, Total	133	mg/kg dry	0.514	EPA 6010B/3050B	11/2/16	11/3/16	
Cadmium, Total	4.15	mg/kg dry	0.514	EPA 6010B/3050B	11/2/16	11/3/16	
Chromium, Total	18.1	mg/kg dry	0.514	EPA 6010B/3050B	11/2/16	11/3/16	
Lead, Total	259	mg/kg dry	5.14	EPA 6010B/3050B	11/2/16	11/3/16	
Mercury, Total	0.30	mg/kg dry	0.02	EPA 7471A	11/2/16	11/2/16	
Selenium, Total	9.63	mg/kg dry	5.14	EPA 6010B/3050B	11/2/16	11/3/16	
Silver, Total	0.832	mg/kg dry	0.514	EPA 6010B/3050B	11/2/16	11/3/16	



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PO#:
Receipt: 10/28/16 13:06 @ 19.8 °C
Date Reported: 11/10/2016
Project Name: Tibble Fork

Sample ID: AF-2

Matrix: Solid

Date Sampled: 10/24/16 8:59

Sampled By: Alan Jenkins

Lab ID: 16J1179-1

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Total Solids	62.4	%	0.1	SM 2540G	10/31/16	10/31/16	
Metals							
Arsenic, Total	10.0	mg/kg dry	8.82	EPA 6010B/3050B	11/2/16	11/3/16	
Barium, Total	59.2	mg/kg dry	0.441	EPA 6010B/3050B	11/2/16	11/3/16	
Cadmium, Total	1.48	mg/kg dry	0.441	EPA 6010B/3050B	11/2/16	11/3/16	
Chromium, Total	11.2	mg/kg dry	0.441	EPA 6010B/3050B	11/2/16	11/3/16	
Lead, Total	59.6	mg/kg dry	4.41	EPA 6010B/3050B	11/2/16	11/3/16	
Mercury, Total	0.06	mg/kg dry	0.02	EPA 7471A	11/2/16	11/2/16	
Selenium, Total	5.62	mg/kg dry	4.41	EPA 6010B/3050B	11/2/16	11/3/16	
Silver, Total	0.630	mg/kg dry	0.441	EPA 6010B/3050B	11/2/16	11/3/16	



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 Mapleton, UT 84664

PO#: _____
 Receipt: 10/28/16 13:06 @ 19.8 °C
 Date Reported: 11/10/2016
 Project Name: **Tibble Fork**

Sample ID: **AF-3**

Matrix: **Solid**

Date Sampled: 10/24/16 9:07

Sampled By: **Alan Jenkins**

Lab ID: **16J1179-C**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Total Solids	63.3	%	0.1	SM 2540G	10/31/16	10/31/16	
Metals							
Arsenic, Total	13.0	mg/kg dry	8.67	EPA 6010B/3050B	11/2/16	11/3/16	
Barium, Total	97.9	mg/kg dry	0.434	EPA 6010B/3050B	11/2/16	11/3/16	
Cadmium, Total	1.94	mg/kg dry	0.434	EPA 6010B/3050B	11/2/16	11/3/16	
Chromium, Total	12.8	mg/kg dry	0.434	EPA 6010B/3050B	11/2/16	11/3/16	
Lead, Total	101	mg/kg dry	4.34	EPA 6010B/3050B	11/2/16	11/3/16	
Mercury, Total	0.17	mg/kg dry	0.02	EPA 7471A	11/2/16	11/2/16	
Selenium, Total	6.04	mg/kg dry	4.34	EPA 6010B/3050B	11/2/16	11/3/16	
Silver, Total	0.615	mg/kg dry	0.434	EPA 6010B/3050B	11/2/16	11/3/16	



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Alan Jenkins
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Mapleton, UT 84664

PO#:
Receipt: 10/28/16 13:06 @ 19.8 °C
Date Reported: 11/10/2016
Project Name: Tibble Fork

Sample ID: AF-4

Matrix: Solid

Date Sampled: 10/24/16 9:15

Sampled By: Alan Jenkins

Lab ID: 16J1179-

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Total Solids	62.4	%	0.1	SM 2540G	10/31/16	10/31/16	
Metals							
Arsenic, Total	23.0	mg/kg dry	7.92	EPA 6010B/3050B	11/2/16	11/3/16	
Barium, Total	126	mg/kg dry	0.396	EPA 6010B/3050B	11/2/16	11/3/16	
Cadmium, Total	3.60	mg/kg dry	0.396	EPA 6010B/3050B	11/2/16	11/3/16	
Chromium, Total	16.9	mg/kg dry	0.396	EPA 6010B/3050B	11/2/16	11/3/16	
Lead, Total	219	mg/kg dry	3.96	EPA 6010B/3050B	11/2/16	11/3/16	
Mercury, Total	0.35	mg/kg dry	0.01	EPA 7471A	11/2/16	11/2/16	
Selenium, Total	9.96	mg/kg dry	3.96	EPA 6010B/3050B	11/2/16	11/3/16	
Silver, Total	0.989	mg/kg dry	0.396	EPA 6010B/3050B	11/2/16	11/3/16	



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Certificate of Analysis

Environmental Contractors, Inc
Alan Jenkins
931 East 800 North
Mapleton, UT 84664

PO#:
Receipt: 10/28/16 13:06 @ 19.8 °C
Date Reported: 11/10/2016
Project Name: Tibble Fork

Sample ID: AF-5

Matrix: Solid

Date Sampled: 10/24/16 9:26

Sampled By: Alan Jenkins

Lab ID: 16J1179-

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Total Solids	63.2	%	0.1	SM 2540G	10/31/16	10/31/16	
Metals							
Arsenic, Total	34.6	mg/kg dry	9.43	EPA 6010B/3050B	11/2/16	11/3/16	
Barium, Total	190	mg/kg dry	0.472	EPA 6010B/3050B	11/2/16	11/3/16	
Cadmium, Total	5.46	mg/kg dry	0.472	EPA 6010B/3050B	11/2/16	11/3/16	
Chromium, Total	24.6	mg/kg dry	0.472	EPA 6010B/3050B	11/2/16	11/3/16	
Lead, Total	383	mg/kg dry	4.72	EPA 6010B/3050B	11/2/16	11/3/16	
Mercury, Total	0.32	mg/kg dry	0.02	EPA 7471A	11/2/16	11/2/16	
Selenium, Total	12.4	mg/kg dry	4.72	EPA 6010B/3050B	11/2/16	11/3/16	
Silver, Total	1.07	mg/kg dry	0.472	EPA 6010B/3050B	11/2/16	11/3/16	



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PO#:
 Receipt: 10/28/16 13:06 @ 19.8 °C
 Date Reported: 11/10/2016
 Project Name: Tibble Fork

Sample ID: CH-1

Matrix: Solid

Date Sampled: 10/24/16 10:47

Sampled By: Alan Jenkins

Lab ID: 16J1179-

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Total Solids	72.9	%	0.1	SM 2540G	10/31/16	10/31/16	
Metals							
Arsenic, Total	13.2	mg/kg dry	8.64	EPA 6010B/3050B	11/2/16	11/3/16	
Barium, Total	139	mg/kg dry	0.432	EPA 6010B/3050B	11/2/16	11/3/16	
Cadmium, Total	1.87	mg/kg dry	0.432	EPA 6010B/3050B	11/2/16	11/3/16	
Chromium, Total	13.4	mg/kg dry	0.432	EPA 6010B/3050B	11/2/16	11/3/16	
Lead, Total	110	mg/kg dry	4.32	EPA 6010B/3050B	11/2/16	11/3/16	
Mercury, Total	0.17	mg/kg dry	0.01	EPA 7471A	11/2/16	11/2/16	
Selenium, Total	5.98	mg/kg dry	4.32	EPA 6010B/3050B	11/2/16	11/3/16	
Silver, Total	0.182	mg/kg dry	0.432	EPA 6010B/3050B	11/2/16	11/3/16	J



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PO#:
Receipt: 10/28/16 13:06 @ 19.8 °C
Date Reported: 11/10/2016
Project Name: Tibble Fork

Sample ID: Mile Rock

Matrix: Water

Lab ID: 16J1179-1

Date Sampled: 10/24/16 11:30

Sampled By: Alan Jenkins

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Metals							
Arsenic, Total	ND	mg/L	0.05	EPA 200.7	10/31/16	10/31/16	
Barium, Total	0.056	mg/L	0.005	EPA 200.7	10/31/16	10/31/16	
Cadmium, Total	ND	mg/L	0.005	EPA 200.7	10/31/16	10/31/16	
Chromium, Total	ND	mg/L	0.005	EPA 200.7	10/31/16	10/31/16	
Lead, Total	ND	mg/L	0.02	EPA 200.7	10/31/16	10/31/16	
Mercury, Total	ND	mg/L	0.0002	EPA 245.1	10/31/16	11/1/16	
Selenium, Total	ND	mg/L	0.02	EPA 200.7	10/31/16	11/1/16	
Silver, Total	ND	mg/L	0.005	EPA 200.7	10/31/16	10/31/16	



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Alan Jenkins
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Mapleton, UT 84664

PO#:
Receipt: 10/28/16 13:06 @ 19.8 °C
Date Reported: 11/10/2016
Project Name: **Tibble Fork**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).

1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.

1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.

1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.

Flag Descriptions

J = Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

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CHAIN OF CUSTODY

COMPANY: NUCWCD (Environmental Contractors Inc.)
 ADDRESS: 931 E. 800 N.
 CITY/STATE/ZIP: Mapleton, UT 84664
 E #: _____ FAX: _____
 CONTACT: Alan Jenkins PROJECT: Tikble Fork
 : alan@eci-solutions.com

BILLING ADDRESS: _____
 BILLING CITY/STATE/ZIP: _____
 PURCHASE ORDER #: _____
 INVOICE EMAIL ADDRESS: _____



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LABORATORIES

TURNAROUND REQUIRED:*

* Expedited turnaround subject to additional charge

TESTS REQUESTED										Bacteria			
BCRA-8 Metals										Total Coliform + E. coli (Present/Absent)	Total Coliform + E. coli (Enumerated)	HPC (Plate Count)	E. coli Only

Use Only	CLIENT SAMPLE INFORMATION				
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	Field: Residual Chlorine
119					
21	H-1	10-24-16	7:40	Soil	
22	H-2		7:50		
23	H-3		7:59		
24	H-4		8:10		
25	H-5		8:14		
26	AF-1		8:45		
27	AF-2		8:59		
28	AF-3		9:07		
29	AF-4		9:15		
30	AF-5		9:26		

Sampled by: (print) Alan K. Jenkins Sampled by: (signature) _____
 Special Instructions: _____
 ON ICE NOT ON ICE Temp (C°): 19.8
 Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.
 Relinquished by: (signature) [Signature] Date/Time 10-29-16 13:06
 Received by: (signature) [Signature] Date/Time 10-28-16 13:06
 Relinquished by: (signature) _____ Date/Time _____
 Received by: (signature) _____ Date/Time _____

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EMTECH - FORD ANALYTICAL LABORATORY

CHAIN OF CUSTODY

PANY: NUCUCD (Environmental Contractors Inc.
 ESS: 931 E. 500 N.
 STATE/ZIP: MAPUTAN, UT 84064
 E #: _____ FAX: _____
 ACT: Alan Jentzke PROJECT: _____
 : alan@eci-solutions.com

BILLING ADDRESS: _____
 BILLING CITY/STATE/ZIP: _____
 PURCHASE ORDER #: _____
 INVOICE EMAIL ADDRESS: _____



CHEMTECH-FORD
LABORATORIES

TURNAROUND REQUIRED:*

* Expedited turnaround subject to additional charge

TESTS REQUESTED										Bacteria				
RCRA - 8 Metals											Total Coliform + E. coli (Present/Absent)	Total Coliform + E. coli (Enumerated)	HPC (Plate Count)	E. coli Only
	1	CH-1	10-24-16	10:47	Soil	/								
	2	Mile Rock	10-24-16	11:30	Water	/								
	3													
	4													
	5													
	6													
	7													
	8													
	9													
10														

Use Only	CLIENT SAMPLE INFORMATION				
179	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	Field: Residual Chlorine
11	CH-1	10-24-16	10:47	Soil	/
12	Mile Rock	10-24-16	11:30	Water	/

Sampled by: [print] Alan Jentzke Sampled by: [signature] _____

Special Instructions: _____

ON ICE NOT ON ICE Temp (C°): 19.8

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Relinquished by: [signature] Alan Jentzke Date/Time 10-28-16 13:06 Received by: [signature] _____ Date/Time 10-28-16 13:06

Relinquished by: [signature] _____ Date/Time _____ Received by: [signature] _____ Date/Time _____

Relinquished by: [signature] _____ Date/Time _____ Received by: [signature] _____ Date/Time _____

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Work Order # J1179

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Sample Receipt



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Delivery Method:

- UPS
- USPS
- FedEx
- Chemtech Courier
- Walk-in
- Customer Courier

Receiving Temperature 19.8 °C

Sample #	Container	Chemtech Lot # or Preservative	Preservation/Handling				Misc Volume (oz/ml)	Comments	
			Number of Subsamples	Preserved by Client/Third Party	Preserved in Receiving/Laboratory	Filtered in Field by Client			
-01-11	G							4oz	
-12	M	718							

Sample Condition
(check if yes)

- Custody Seals
- Containers Intact
- COC/Labels Agree
- Preservation Confirmed
- Received on Ice
- Correct Containers(s)
- Sufficient Sample Volume
- Headspace Present (VOC)
- Temperature Blank
- Received within Holding Time

Plastic Containers

- A- Plastic Unpreserved
- B- Miscellaneous Plastic
- C- Cyanide Qt (NaOH)
- E- Coliform/Ecoli/HPC
- F- Sulfide Qt (Zn Acetate)
- L- Mercury 1631
- M- Metals Pint (HNO3)
- N- Nutrient Pint (H2SO4)
- R- Radiological (HNO3)
- S- Sludge Cups/Tubs
- Q- Plastic Bag

Glass Containers

- D- 625 (Na2S2O3)
- G- Glass Unpreserved
- H- HAAs (NH4Cl)
- J- 508/515/525 (Na2SO3)
- K- 515.3 Herbicides
- O- Oil & Grease (HCl)
- P- Phenols (H2SO4)
- T- TOC/TOX (H3PO4)
- U- 531 (MCAA, Na2S2O3)
- V- 524/THMs (Ascorbic Acid)
- W- 8260 VOC (1:1 HCl)
- X- Vial Unpreserved
- Y- 624/504 (Na2S2O3)
- Z- Miscellaneous Glass



12/6/2016

Work Order: 16K0840
Project: Tibble Fork

Environmental Contractors, Inc

Attn: Alan Jenkins

931 East 800 North

Mapleton, UT 84664

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.



Approved By:

Mark Broadhead, Project Manager



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PO#:
 Receipt: 11/21/16 12:23 @ 8.3 °C
 Date Reported: 12/6/2016
 Project Name: **Tibble Fork**

Sample ID: **Mile Rock**

Matrix: **Water**

Date Sampled: 11/7/16 8:15

Sampled By: **Alan Jenkins**

Lab ID: **16K0840-C**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Metals							
Arsenic, Total	ND	mg/L	0.05	EPA 200.7	11/30/16	11/30/16	
Barium, Total	0.053	mg/L	0.005	EPA 200.7	11/28/16	11/28/16	
Cadmium, Total	ND	mg/L	0.005	EPA 200.7	11/30/16	11/30/16	
Chromium, Total	ND	mg/L	0.005	EPA 200.7	11/28/16	11/28/16	
Lead, Total	ND	mg/L	0.02	EPA 200.7	11/28/16	11/28/16	
Mercury, Total	ND	mg/L	0.0002	EPA 245.1	11/29/16	11/29/16	
Selenium, Total	ND	mg/L	0.02	EPA 200.7	11/30/16	11/30/16	
Silver, Total	ND	mg/L	0.005	EPA 200.7	11/28/16	11/28/16	



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PO#:
 Receipt: 11/21/16 12:23 @ 8.3 °C
 Date Reported: 12/6/2016
 Project Name: **Tibble Fork**

Sample ID: **Mile Rock**

Matrix: **Water**

Date Sampled: 11/21/16 9:05

Sampled By: **Alan Jenkins**

Lab ID: **16K0840-1**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Metals							
Arsenic, Total	ND	mg/L	0.05	EPA 200.7	11/28/16	11/30/16	
Barium, Total	0.082	mg/L	0.005	EPA 200.7	11/28/16	11/30/16	
Cadmium, Total	ND	mg/L	0.005	EPA 200.7	11/28/16	11/30/16	
Chromium, Total	ND	mg/L	0.005	EPA 200.7	11/28/16	11/30/16	
Lead, Total	ND	mg/L	0.02	EPA 200.7	11/28/16	11/30/16	
Mercury, Total	ND	mg/L	0.0002	EPA 245.1	11/29/16	11/29/16	
Selenium, Total	ND	mg/L	0.02	EPA 200.7	11/28/16	11/30/16	
Silver, Total	ND	mg/L	0.005	EPA 200.7	11/28/16	11/30/16	



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931 East 800 North
Mapleton, UT 84664

PO#:
Receipt: 11/21/16 12:23 @ 8.3 °C
Date Reported: 12/6/2016
Project Name: **Tibble Fork**

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).

1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.

1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.

1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.



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CHAIN OF CUSTODY

COMPANY: NUCWCID (Environmental Contractors Inc.)
 ADDRESS: 931 E 300 N
 CITY/STATE/ZIP: Mapleton Utah 84464
 PHONE #: _____ FAX: _____
 CONTACT: Alan Jenkins PROJECT: Tibble Fork
 EMAIL: alan@eci-solutions.com

BILLING ADDRESS: _____
 BILLING CITY/STATE/ZIP: _____
 PURCHASE ORDER #: _____
 INVOICE EMAIL ADDRESS: _____



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TURNAROUND REQUIRED:*

* Expedited turnaround subject to additional charge

TESTS REQUESTED	Bacteria			
	Total Coliform + E. coli (Present/Absent)	Total Coliform + E. coli (Enumerated)	HPC (Plate Count)	E. coli Only
RCRAB METALS				

Lab Use Only	CLIENT SAMPLE INFORMATION				
-0840	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	Field: Residual Chlorine
01	Mile Rock	Nov 7, 16	8:15 AM	water	
02	Mile Rock	Nov 21, 16	9:05 AM	"	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Sampled by: [print] Alan Jenkins Sampled by: [signature] _____

Special Instructions: _____

ON ICE NOT ON ICE Temp (C°): 8-3

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Relinquished by: [signature] <u>Alan K. Jenkins</u>	Date/Time <u>11-21-16 12:25</u>	Received by: [signature] <u>B. White</u>	Date/Time <u>11/21/16 12:23</u>
Relinquished by: [signature] _____	Date/Time _____	Received by: [signature] _____	Date/Time _____
Relinquished by: [signature] _____	Date/Time _____	Received by: [signature] _____	Date/Time _____

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Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.

Work Order # K0840

CHEMTECH FORD LABORATORIES

Sample Receipt



CHEMTECH-FORD
LABORATORIES

Delivery Method:

- UPS
- USPS
- FedEx
- Chemtech Courier
- Walk-in
- Customer Courier

Receiving Temperature 8.3 °C

Sample #	Container	Chemtech Lot # or Preservative	Number of Subsamples	Preserved by Client/Third Party	Preserved in Receiving/Laboratory	Filtered in Field by Client	Misc Volume (oz/mL)	Comments
01,02	M	718 729						

Sample Condition (check if yes)

- Custody Seals
- Containers Intact
- COC/Labels Agree
- Preservation Confirmed
- Received on Ice
- Correct Containers(s)
- Sufficient Sample Volume
- Headspace Present (VOC)
- Temperature Blank
- Received within Holding Time

Plastic Containers

- A- Plastic Unpreserved
- B- Miscellaneous Plastic
- C- Cyanide Qt (NaOH)
- E- Coliform/Ecoli/HPC
- F- Sulfide Qt (Zn Acetate)
- L- Mercury 1631
- M- Metals Pint (HNO3)
- N- Nutrient Pint (H2SO4)
- R- Radiological (HNO3)
- S- Sludge Cups/Tubs
- Q- Plastic Bag

Glass Containers

- D- 625 (Na2S2O3)
- G- Glass Unpreserved
- H- HAAs (NH4Cl)
- J- 508/515/525 (Na2SO3)
- K- 515.3 Herbicides
- O- Oil & Grease (HCl)
- P- Phenols (H2SO4)
- T- TOC/TOX (H3PO4)
- U- 531 (MCAA, Na2S2O3)
- V- 524/THMs (Ascorbic Acid)
- W- 8260 VOC (1:1 HCl)
- X- Vial Unpreserved
- Y- 624/504 (Na2S2O3)
- Z- Miscellaneous Glass

Sediment Screening – Dry Weight Sediment

Screening Values

Health-based screening values are taken from the Agency for Toxic Substance and Disease Registry (ATSDR). As is most appropriate for recreational exposures, ATSDR Environmental Media Evaluation Guideline (EMEG) health-based child intermediate exposure (>14 days up to one year) comparison values, were chosen first if available, followed by ATSDR EMEG health-based child chronic exposure (>1 year) comparison values. In the absence of EMEGs, ATSDR child Reference Dose Media Evaluation Guidelines (RMEGs), based upon EPA RfDs, were used. In the absence of RMEGs, EPA risk-based Regional Screening Levels (RSLs) were used.

Aquatic life screening values come from EPA Region 3 and are considered to be benchmarks protective of aquatic life uses (EPA Freshwater Sediment Screening Benchmarks 2006).

Table 3. Sediment Screening Values

CAS	Chemical	Units	Health-Based Comparison Value for Sediment Ingestion (CV) [Total Metals]	EPA Region 3 Freshwater Sediment Screening Values for Aquatic Life
7429-90-5	Aluminum	mg/kg	165,428	
7440-36-0	Antimony	mg/kg	66	
7440-38-2	Arsenic	mg/kg	753	9.80
7440-39-3	Barium	mg/kg	33,086	
7440-41-7	Beryllium	mg/kg	331	
7440-43-9	Cadmium	mg/kg	87	0.99
7440-47-3	Chromium	mg/kg	213,402	43.40
7440-48-4	Cobalt	mg/kg	1,654	50.00
7440-50-8	Copper	mg/kg	1,654	31.60
7439-89-6	Iron	mg/kg	115,799	20000.00
7439-92-1	Lead	mg/kg	400	35.80
7439-96-5	Manganese	mg/kg	7,775	460.00
7439-97-6	Mercury	mg/kg	1,158	0.18
7440-02-0	Nickel	mg/kg	3,309	22.70
7782-49-2	Selenium	mg/kg	827	2.00
7440-22-4	Silver	mg/kg	827	1.00
7440-62-2	Vanadium	mg/kg	1,654	
7440-66-6	Zinc	mg/kg	49,628	121.00

ELECTRONIC CODE OF FEDERAL REGULATIONS**e-CFR data is current as of January 20, 2017**

Title 40 → Chapter I → Subchapter I → Part 261 → Subpart C → §261.24

Title 40: Protection of Environment
PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE
Subpart C—Characteristics of Hazardous Waste**§261.24 Toxicity characteristic.**

(a) A solid waste (except manufactured gas plant waste) exhibits the characteristic of toxicity if, using the Toxicity Characteristic Leaching Procedure, test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of this chapter, the extract from a representative sample of the waste contains any of the contaminants listed in table 1 at the concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering using the methodology outlined in Method 1311, is considered to be the extract for the purpose of this section.

(b) A solid waste that exhibits the characteristic of toxicity has the EPA Hazardous Waste Number specified in Table 1 which corresponds to the toxic contaminant causing it to be hazardous.

TABLE 1—MAXIMUM CONCENTRATION OF CONTAMINANTS FOR THE TOXICITY CHARACTERISTIC

EPA HW No. ¹	Contaminant	CAS No. ²	Regulatory Level (mg/L)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	⁴ 200.0
D024	m-Cresol	108-39-4	⁴ 200.0
D025	p-Cresol	106-44-5	⁴ 200.0
D026	Cresol		⁴ 200.0
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	³ 0.13
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	³ 0.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	³ 5.0
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0