

ATTACHMENT 3

LABORATORY ANALYTICAL REPORTS

ATTACHMENT 3.1

APRIL 2024 REPORT



ANALYTICAL REPORT

May 08, 2024

American Environmental - CO

Sample Delivery Group: L1731373
Samples Received: 05/01/2024
Project Number: COORS ENERGY
Description: Keenesburg Mine
Site: KEENESBURG ASH
Report To: Ryan Smith
8191 Southpark Lane
Suite 107
Littleton, CO 80120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Entire Report Reviewed By:

Chris Ward

Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

ACCOUNT:
American Environmental - CO

PROJECT:
COORS ENERGY

SDG:
L1731373

DATE/TIME:
05/08/24 15:55

PAGE:
1 of 41

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¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

SAMPLE SUMMARY

PC-1 L1731373-01 GW

Collected by
Ryan Smith

Collected date/time
04/30/24 10:30

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2280634	1	05/07/24 12:25	05/07/24 12:25	DJS	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2278718	1	05/02/24 09:20	05/02/24 15:03	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2278673	1	05/02/24 10:41	05/02/24 10:41	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	10	05/06/24 04:57	05/06/24 04:57	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	100	05/06/24 05:13	05/06/24 05:13	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	1	05/05/24 09:38	05/05/24 17:58	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	1	05/07/24 09:50	05/07/24 12:25	DJS	Mt. Juliet, TN

PC-2 L1731373-02 GW

Collected by
Ryan Smith

Collected date/time
04/30/24 11:15

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2280634	1	05/07/24 13:26	05/07/24 13:26	DJS	Mt. Juliet, TN
Calculated Results	WG2280634	1	05/07/24 12:29	05/07/24 12:29	DJS	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2278752	1	05/02/24 09:34	05/02/24 13:36	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2278673	1	05/02/24 10:47	05/02/24 10:47	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	10	05/06/24 05:29	05/06/24 05:29	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	100	05/06/24 05:45	05/06/24 05:45	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	1	05/05/24 09:38	05/05/24 18:02	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	5	05/05/24 09:38	05/05/24 21:33	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	1	05/07/24 09:50	05/07/24 12:29	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	5	05/07/24 09:50	05/07/24 13:26	DJS	Mt. Juliet, TN

PC-5 L1731373-03 GW

Collected by
Ryan Smith

Collected date/time
04/30/24 12:15

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2280634	1	05/07/24 12:33	05/07/24 12:33	DJS	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2278718	1	05/02/24 09:20	05/02/24 15:03	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2278673	1	05/02/24 10:51	05/02/24 10:51	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	10	05/06/24 06:01	05/06/24 06:01	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	1	05/05/24 09:38	05/05/24 18:06	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	1	05/07/24 09:50	05/07/24 12:33	DJS	Mt. Juliet, TN

PC-6 L1731373-04 GW

Collected by
Ryan Smith

Collected date/time
04/30/24 11:45

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2280634	1	05/07/24 12:37	05/07/24 12:37	DJS	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2278752	1	05/02/24 09:34	05/02/24 13:36	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2278673	1	05/02/24 10:56	05/02/24 10:56	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	10	05/06/24 06:32	05/06/24 06:32	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	1	05/05/24 09:38	05/05/24 18:10	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	1	05/07/24 09:50	05/07/24 12:37	DJS	Mt. Juliet, TN

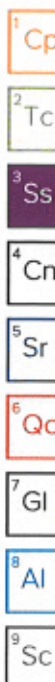
AMW-1 L1731373-05 GW

Collected by
Ryan Smith

Collected date/time
04/29/24 14:30

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2280634	1	05/07/24 12:41	05/07/24 12:41	DJS	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2278718	1	05/02/24 09:20	05/02/24 15:03	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2278673	1	05/02/24 11:01	05/02/24 11:01	KA	Mt. Juliet, TN



SAMPLE SUMMARY

AMW-1 L1731373-05 GW

Collected by
Ryan Smith

Collected date/time
04/29/24 14:30

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2280616	1	05/06/24 07:04	05/06/24 07:04	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	10	05/06/24 07:52	05/06/24 07:52	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	1	05/05/24 09:38	05/05/24 18:21	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	1	05/07/24 09:50	05/07/24 12:41	DJS	Mt. Juliet, TN

AMW-2 L1731373-06 GW

Collected by
Ryan Smith

Collected date/time
04/30/24 11:00

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2280634	1	05/07/24 13:30	05/07/24 13:30	DJS	Mt. Juliet, TN
Calculated Results	WG2280634	1	05/07/24 12:45	05/07/24 12:45	DJS	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2278718	1	05/02/24 09:20	05/02/24 15:03	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2278673	1	05/02/24 11:22	05/02/24 11:22	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	10	05/06/24 08:08	05/06/24 08:08	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	100	05/06/24 08:24	05/06/24 08:24	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	1	05/05/24 09:38	05/05/24 18:25	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	5	05/05/24 09:38	05/05/24 21:36	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	1	05/07/24 09:50	05/07/24 12:45	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	5	05/07/24 09:50	05/07/24 13:30	DJS	Mt. Juliet, TN

SMW-2 L1731373-07 GW

Collected by
Ryan Smith

Collected date/time
04/30/24 14:45

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2280634	1	05/07/24 13:33	05/07/24 13:33	DJS	Mt. Juliet, TN
Calculated Results	WG2280634	1	05/07/24 12:49	05/07/24 12:49	DJS	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2278718	1	05/02/24 09:20	05/02/24 15:03	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2278354	1	05/02/24 10:40	05/02/24 10:40	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	10	05/06/24 08:40	05/06/24 08:40	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	100	05/06/24 08:56	05/06/24 08:56	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	1	05/05/24 09:38	05/05/24 18:29	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	5	05/05/24 09:38	05/05/24 21:40	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	1	05/07/24 09:50	05/07/24 12:49	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	5	05/07/24 09:50	05/07/24 13:33	DJS	Mt. Juliet, TN

DUP L1731373-08 GW

Collected by
Ryan Smith

Collected date/time
04/29/24 14:45

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2280634	1	05/07/24 12:53	05/07/24 12:53	DJS	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2278718	1	05/02/24 09:20	05/02/24 15:03	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2278748	1	05/02/24 12:06	05/02/24 12:06	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	1	05/06/24 09:12	05/06/24 09:12	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	10	05/06/24 09:27	05/06/24 09:27	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	1	05/05/24 09:38	05/05/24 18:33	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	1	05/07/24 09:50	05/07/24 12:53	DJS	Mt. Juliet, TN

SAMPLE SUMMARY

FPW L1731373-09 GW

Collected by
Ryan Smith

Collected date/time
04/30/24 15:15

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2280634	1	05/07/24 13:03	05/07/24 13:03	DJS	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2278718	1	05/02/24 09:20	05/02/24 15:03	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2278748	1	05/02/24 12:09	05/02/24 12:09	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	1	05/06/24 09:43	05/06/24 09:43	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	10	05/06/24 09:59	05/06/24 09:59	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	1	05/05/24 09:38	05/05/24 18:36	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	1	05/07/24 09:50	05/07/24 13:03	DJS	Mt. Juliet, TN

DH-96 L1731373-10 GW

Collected by
Ryan Smith

Collected date/time
04/30/24 10:15

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2280634	1	05/07/24 13:07	05/07/24 13:07	DJS	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2278718	1	05/02/24 09:20	05/02/24 15:03	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2278748	1	05/02/24 12:42	05/02/24 12:42	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	1	05/06/24 10:15	05/06/24 10:15	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	10	05/06/24 11:03	05/06/24 11:03	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	1	05/05/24 09:38	05/05/24 18:40	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	1	05/07/24 09:50	05/07/24 13:07	DJS	Mt. Juliet, TN

DH-122 L1731373-11 GW

Collected by
Ryan Smith

Collected date/time
04/30/24 09:00

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2280634	1	05/07/24 13:11	05/07/24 13:11	DJS	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2278718	1	05/02/24 09:20	05/02/24 15:03	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2278748	1	05/02/24 12:46	05/02/24 12:46	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	1	05/06/24 11:19	05/06/24 11:19	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2280616	10	05/06/24 11:35	05/06/24 11:35	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2279515	1	05/05/24 09:38	05/05/24 18:44	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2280634	1	05/07/24 09:50	05/07/24 13:11	DJS	Mt. Juliet, TN

TRIP BLANK L1731373-12 GW

Collected by
Ryan Smith

Collected date/time
04/30/24 00:00

Received date/time
05/01/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2280790	1	05/05/24 23:34	05/05/24 23:34	DYW	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris Ward
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

PC-1

Collected date/time: 04/30/24 10:30

SAMPLE RESULTS - 01

L1731373

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.35		1	05/07/2024 12:25	WG2280634

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	1620		2.50	1	05/07/2024 12:25	WG2280634

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	3330		50.0	1	05/02/2024 15:03	WG2278718

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	302		20.0	1	05/02/2024 10:41	WG2278673
Alkalinity,Carbonate	ND		20.0	1	05/02/2024 10:41	WG2278673

Sample Narrative:

L1731373-01 WG2278673: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	18.3	<u>B</u>	10.0	10	05/06/2024 04:57	WG2280616
Fluoride	1.72		1.50	10	05/06/2024 04:57	WG2280616
Sulfate	1790		500	100	05/06/2024 05:13	WG2280616

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND	<u>F1</u>	0.0100	1	05/05/2024 17:58	WG2279515
Arsenic,Dissolved	ND	<u>F1</u>	0.0100	1	05/05/2024 17:58	WG2279515
Barium,Dissolved	0.0114	<u>F1</u>	0.00500	1	05/05/2024 17:58	WG2279515
Boron,Dissolved	0.558	<u>F1</u>	0.200	1	05/05/2024 17:58	WG2279515
Cadmium,Dissolved	ND	<u>F1</u>	0.00200	1	05/05/2024 17:58	WG2279515
Calcium	496		1.00	1	05/07/2024 12:25	WG2280634
Calcium,Dissolved	457	<u>F1</u>	1.00	1	05/05/2024 17:58	WG2279515
Iron,Dissolved	ND	<u>F1</u>	0.100	1	05/05/2024 17:58	WG2279515
Lead,Dissolved	ND	<u>F1</u>	0.00600	1	05/05/2024 17:58	WG2279515
Magnesium	92.3		1.00	1	05/07/2024 12:25	WG2280634
Magnesium,Dissolved	88.6	<u>F1</u>	1.00	1	05/05/2024 17:58	WG2279515
Manganese,Dissolved	ND	<u>F1</u>	0.0100	1	05/05/2024 17:58	WG2279515
Molybdenum,Dissolved	0.00599	<u>F1</u>	0.00500	1	05/05/2024 17:58	WG2279515
Potassium,Dissolved	11.5	<u>F1</u>	2.00	1	05/05/2024 17:58	WG2279515
Selenium,Dissolved	0.0778	<u>F1</u>	0.0100	1	05/05/2024 17:58	WG2279515
Sodium	402		3.00	1	05/07/2024 12:25	WG2280634
Sodium,Dissolved	377	<u>F1</u>	3.00	1	05/05/2024 17:58	WG2279515

PC-2

Collected date/time: 04/30/24 11:15

SAMPLE RESULTS - 02

L1731373

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	22.1		1	05/07/2024 13:26	WG2280634

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	2570		2.50	1	05/07/2024 12:29	WG2280634

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	7460		200	1	05/02/2024 13:36	WG2278752

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	968		20.0	1	05/02/2024 10:47	WG2278673
Alkalinity,Carbonate	ND		20.0	1	05/02/2024 10:47	WG2278673

Sample Narrative:

L1731373-02 WG2278673: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	900		10.0	10	05/06/2024 05:29	WG2280616
Fluoride	ND		1.50	10	05/06/2024 05:29	WG2280616
Sulfate	5460		500	100	05/06/2024 05:45	WG2280616

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND	F1	0.0100	1	05/05/2024 18:02	WG2279515
Arsenic,Dissolved	ND	F1	0.0100	1	05/05/2024 18:02	WG2279515
Barium,Dissolved	0.0126	F1	0.00500	1	05/05/2024 18:02	WG2279515
Boron,Dissolved	0.297	F1	0.200	1	05/05/2024 18:02	WG2279515
Cadmium,Dissolved	ND	F1	0.00200	1	05/05/2024 18:02	WG2279515
Calcium	457		1.00	1	05/07/2024 12:29	WG2280634
Calcium,Dissolved	415	F1	1.00	1	05/05/2024 18:02	WG2279515
Iron,Dissolved	ND	F1	0.100	1	05/05/2024 18:02	WG2279515
Lead,Dissolved	ND	F1	0.00600	1	05/05/2024 18:02	WG2279515
Magnesium	348		1.00	1	05/07/2024 12:29	WG2280634
Magnesium,Dissolved	338	F1	1.00	1	05/05/2024 18:02	WG2279515
Manganese,Dissolved	2.09	F1	0.0100	1	05/05/2024 18:02	WG2279515
Molybdenum,Dissolved	ND	F1	0.00500	1	05/05/2024 18:02	WG2279515
Potassium,Dissolved	22.3	F1	2.00	1	05/05/2024 18:02	WG2279515
Selenium,Dissolved	ND	F1	0.0100	1	05/05/2024 18:02	WG2279515
Sodium	2550		15.0	5	05/07/2024 13:26	WG2280634
Sodium,Dissolved	2420	F1	15.0	5	05/05/2024 21:33	WG2279515

ACCOUNT:

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L1731373

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SAMPLE RESULTS - 03

L1731373

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.54		1	05/07/2024 12:33	WG2280634

Calculated Results

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	2130		2.50	1	05/07/2024 12:33	WG2280634

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	2990		50.0	1	05/02/2024 15:03	WG2278718

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	636		20.0	1	05/02/2024 10:51	WG2278673
Alkalinity,Carbonate	ND		20.0	1	05/02/2024 10:51	WG2278673

Sample Narrative:

L1731373-03 WG2278673: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	132		10.0	10	05/06/2024 06:01	WG2280616
Fluoride	ND		1.50	10	05/06/2024 06:01	WG2280616
Sulfate	1860		50.0	10	05/06/2024 06:01	WG2280616

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND	F1	0.0100	1	05/05/2024 18:06	WG2279515
Arsenic,Dissolved	ND	F1	0.0100	1	05/05/2024 18:06	WG2279515
Barium,Dissolved	0.0342	F1	0.00500	1	05/05/2024 18:06	WG2279515
Boron,Dissolved	ND	F1	0.200	1	05/05/2024 18:06	WG2279515
Cadmium,Dissolved	ND	F1	0.00200	1	05/05/2024 18:06	WG2279515
Calcium	595		1.00	1	05/07/2024 12:33	WG2280634
Calcium,Dissolved	536	F1	1.00	1	05/05/2024 18:06	WG2279515
Iron,Dissolved	ND	F1	0.100	1	05/05/2024 18:06	WG2279515
Lead,Dissolved	ND	F1	0.00600	1	05/05/2024 18:06	WG2279515
Magnesium	157		1.00	1	05/07/2024 12:33	WG2280634
Magnesium,Dissolved	149	F1	1.00	1	05/05/2024 18:06	WG2279515
Manganese,Dissolved	17.8	F1	0.0100	1	05/05/2024 18:06	WG2279515
Molybdenum,Dissolved	ND	F1	0.00500	1	05/05/2024 18:06	WG2279515
Potassium,Dissolved	19.0	F1	2.00	1	05/05/2024 18:06	WG2279515
Selenium,Dissolved	ND	F1	0.0100	1	05/05/2024 18:06	WG2279515
Sodium	270		3.00	1	05/07/2024 12:33	WG2280634
Sodium,Dissolved	250	F1	3.00	1	05/05/2024 18:06	WG2279515

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Collected date/time: 04/30/24 11:45

SAMPLE RESULTS - 04

L1731373

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	7.00		1	05/07/2024 12:37	WG2280634

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	776		2.50	1	05/07/2024 12:37	WG2280634

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	8290		50.0	1	05/02/2024 13:36	WG2278752

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	327		20.0	1	05/02/2024 10:56	WG2278673
Alkalinity,Carbonate	ND		20.0	1	05/02/2024 10:56	WG2278673

Sample Narrative:

L1731373-04 WG2278673: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	51.0		10.0	10	05/06/2024 06:32	WG2280616
Fluoride	2.59		1.50	10	05/06/2024 06:32	WG2280616
Sulfate	1250		50.0	10	05/06/2024 06:32	WG2280616

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND	F1	0.0100	1	05/05/2024 18:10	WG2279515
Arsenic,Dissolved	ND	F1	0.0100	1	05/05/2024 18:10	WG2279515
Barium,Dissolved	0.00850	F1	0.00500	1	05/05/2024 18:10	WG2279515
Boron,Dissolved	0.590	F1	0.200	1	05/05/2024 18:10	WG2279515
Cadmium,Dissolved	ND	F1	0.00200	1	05/05/2024 18:10	WG2279515
Calcium	179		1.00	1	05/07/2024 12:37	WG2280634
Calcium,Dissolved	160	F1	1.00	1	05/05/2024 18:10	WG2279515
Iron,Dissolved	ND	F1	0.100	1	05/05/2024 18:10	WG2279515
Lead,Dissolved	ND	F1	0.00600	1	05/05/2024 18:10	WG2279515
Magnesium	80.0		1.00	1	05/07/2024 12:37	WG2280634
Magnesium,Dissolved	75.7	F1	1.00	1	05/05/2024 18:10	WG2279515
Manganese,Dissolved	0.0106	F1	0.0100	1	05/05/2024 18:10	WG2279515
Molybdenum,Dissolved	0.00721	F1	0.00500	1	05/05/2024 18:10	WG2279515
Potassium,Dissolved	7.36	F1	2.00	1	05/05/2024 18:10	WG2279515
Selenium,Dissolved	0.0666	F1	0.0100	1	05/05/2024 18:10	WG2279515
Sodium	448		3.00	1	05/07/2024 12:37	WG2280634
Sodium,Dissolved	415	F1	3.00	1	05/05/2024 18:10	WG2279515

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Collected date/time: 04/29/24 14:30

SAMPLE RESULTS - 05

L1731373

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.02		1	05/07/2024 12:41	WG2280634

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	933		2.50	1	05/07/2024 12:41	WG2280634

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1520		25.0	1	05/02/2024 15:03	WG2278718

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	208		20.0	1	05/02/2024 11:01	WG2278673
Alkalinity,Bicarbonate	208		20.0	1	05/02/2024 11:01	WG2278673
Alkalinity,Carbonate	ND		20.0	1	05/02/2024 11:01	WG2278673
Alkalinity,Hydroxide	ND		20.0	1	05/02/2024 11:01	WG2278673

Sample Narrative:

L1731373-05 WG2278673: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	26.6		1.00	1	05/06/2024 07:04	WG2280616
Fluoride	1.03		0.150	1	05/06/2024 07:04	WG2280616
Sulfate	795		50.0	10	05/06/2024 07:52	WG2280616

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND	F1	0.0100	1	05/05/2024 18:21	WG2279515
Arsenic,Dissolved	ND	F1	0.0100	1	05/05/2024 18:21	WG2279515
Barium,Dissolved	0.0260	F1	0.00500	1	05/05/2024 18:21	WG2279515
Boron,Dissolved	ND	F1	0.200	1	05/05/2024 18:21	WG2279515
Cadmium,Dissolved	ND	F1	0.00200	1	05/05/2024 18:21	WG2279515
Calcium	260		1.00	1	05/07/2024 12:41	WG2280634
Calcium,Dissolved	230	F1	1.00	1	05/05/2024 18:21	WG2279515
Iron,Dissolved	ND	F1	0.100	1	05/05/2024 18:21	WG2279515
Lead,Dissolved	ND	F1	0.00600	1	05/05/2024 18:21	WG2279515
Magnesium	69.2		1.00	1	05/07/2024 12:41	WG2280634
Magnesium,Dissolved	65.2	F1	1.00	1	05/05/2024 18:21	WG2279515
Manganese,Dissolved	ND	F1	0.0100	1	05/05/2024 18:21	WG2279515
Molybdenum,Dissolved	ND	F1	0.00500	1	05/05/2024 18:21	WG2279515
Potassium,Dissolved	3.27	F1	2.00	1	05/05/2024 18:21	WG2279515
Selenium,Dissolved	0.0135	F1	0.0100	1	05/05/2024 18:21	WG2279515
Sodium	142		3.00	1	05/07/2024 12:41	WG2280634
Sodium,Dissolved	133	F1	3.00	1	05/05/2024 18:21	WG2279515

AMW-2

Collected date/time: 04/30/24 11:00

SAMPLE RESULTS - 06

L1731373

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	14.9		1	05/07/2024 13:30	WG2280634

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	1890		2.50	1	05/07/2024 12:45	WG2280634

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	5090		100	1	05/02/2024 15:03	WG2278718

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	829		20.0	1	05/02/2024 11:22	WG2278673
Alkalinity,Bicarbonate	829		20.0	1	05/02/2024 11:22	WG2278673
Alkalinity,Carbonate	ND		20.0	1	05/02/2024 11:22	WG2278673
Alkalinity,Hydroxide	ND		20.0	1	05/02/2024 11:22	WG2278673

Sample Narrative:

L1731373-06 WG2278673: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	357		10.0	10	05/06/2024 08:08	WG2280616
Fluoride	ND		1.50	10	05/06/2024 08:08	WG2280616
Sulfate	3380		500	100	05/06/2024 08:24	WG2280616

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND	F1	0.0100	1	05/05/2024 18:25	WG2279515
Arsenic,Dissolved	ND	F1	0.0100	1	05/05/2024 18:25	WG2279515
Barium,Dissolved	0.0185	F1	0.00500	1	05/05/2024 18:25	WG2279515
Boron,Dissolved	0.247	F1	0.200	1	05/05/2024 18:25	WG2279515
Cadmium,Dissolved	ND	F1	0.00200	1	05/05/2024 18:25	WG2279515
Calcium	472		1.00	1	05/07/2024 12:45	WG2280634
Calcium,Dissolved	432	F1	1.00	1	05/05/2024 18:25	WG2279515
Iron,Dissolved	ND	F1	0.100	1	05/05/2024 18:25	WG2279515
Lead,Dissolved	ND	F1	0.00600	1	05/05/2024 18:25	WG2279515
Magnesium	173		1.00	1	05/07/2024 12:45	WG2280634
Magnesium,Dissolved	170	F1	1.00	1	05/05/2024 18:25	WG2279515
Manganese,Dissolved	3.49	F1	0.0100	1	05/05/2024 18:25	WG2279515
Molybdenum,Dissolved	ND	F1	0.00500	1	05/05/2024 18:25	WG2279515
Potassium,Dissolved	29.5	F1	2.00	1	05/05/2024 18:25	WG2279515
Selenium,Dissolved	ND	F1	0.0100	1	05/05/2024 18:25	WG2279515
Sodium	1530		15.0	5	05/07/2024 13:30	WG2280634
Sodium,Dissolved	1420	F1	15.0	5	05/05/2024 21:36	WG2279515

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Collected date/time: 04/30/24 14:45

SAMPLE RESULTS - 07

L1731373

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	15.9		1	05/07/2024 13:33	WG2280634

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	1870		2.50	1	05/07/2024 12:49	WG2280634

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	5830		100	1	05/02/2024 15:03	WG2278718

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	989		20.0	1	05/02/2024 10:40	WG2278354
Alkalinity,Bicarbonate	989		20.0	1	05/02/2024 10:40	WG2278354
Alkalinity,Carbonate	ND		20.0	1	05/02/2024 10:40	WG2278354
Alkalinity,Hydroxide	ND		20.0	1	05/02/2024 10:40	WG2278354

Sample Narrative:

L1731373-07 WG2278354: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	753		10.0	10	05/06/2024 08:40	WG2280616
Fluoride	ND		1.50	10	05/06/2024 08:40	WG2280616
Sulfate	2910		500	100	05/06/2024 08:56	WG2280616

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND	F1	0.0100	1	05/05/2024 18:29	WG2279515
Arsenic,Dissolved	ND	F1	0.0100	1	05/05/2024 18:29	WG2279515
Barium,Dissolved	0.0110	F1	0.00500	1	05/05/2024 18:29	WG2279515
Boron,Dissolved	0.341	F1	0.200	1	05/05/2024 18:29	WG2279515
Cadmium,Dissolved	ND	F1	0.00200	1	05/05/2024 18:29	WG2279515
Calcium	474		1.00	1	05/07/2024 12:49	WG2280634
Calcium,Dissolved	435	F1	1.00	1	05/05/2024 18:29	WG2279515
Iron,Dissolved	ND	F1	0.100	1	05/05/2024 18:29	WG2279515
Lead,Dissolved	ND	F1	0.00600	1	05/05/2024 18:29	WG2279515
Magnesium	166		1.00	1	05/07/2024 12:49	WG2280634
Magnesium,Dissolved	163	F1	1.00	1	05/05/2024 18:29	WG2279515
Manganese,Dissolved	0.479	F1	0.0100	1	05/05/2024 18:29	WG2279515
Molybdenum,Dissolved	ND	F1	0.00500	1	05/05/2024 18:29	WG2279515
Potassium,Dissolved	16.9	F1	2.00	1	05/05/2024 18:29	WG2279515
Selenium,Dissolved	ND	F1	0.0100	1	05/05/2024 18:29	WG2279515
Sodium	1610		15.0	5	05/07/2024 13:33	WG2280634
Sodium,Dissolved	1530	F1	15.0	5	05/05/2024 21:40	WG2279515

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SAMPLE RESULTS - 08

L1731373

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.98		1	05/07/2024 12:53	WG2280634

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	953		2.50	1	05/07/2024 12:53	WG2280634

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1620		25.0	1	05/02/2024 15:03	WG2278718

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	202		20.0	1	05/02/2024 12:06	WG2278748
Alkalinity,Bicarbonate	202		20.0	1	05/02/2024 12:06	WG2278748
Alkalinity,Carbonate	ND		20.0	1	05/02/2024 12:06	WG2278748
Alkalinity,Hydroxide	ND		20.0	1	05/02/2024 12:06	WG2278748

Sample Narrative:

L1731373-08 WG2278748: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	26.8		1.00	1	05/06/2024 09:12	WG2280616
Fluoride	0.943		0.150	1	05/06/2024 09:12	WG2280616
Sulfate	811		50.0	10	05/06/2024 09:27	WG2280616

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND	F1	0.0100	1	05/05/2024 18:33	WG2279515
Arsenic,Dissolved	ND	F1	0.0100	1	05/05/2024 18:33	WG2279515
Barium,Dissolved	0.0261	F1	0.00500	1	05/05/2024 18:33	WG2279515
Boron,Dissolved	ND	F1	0.200	1	05/05/2024 18:33	WG2279515
Cadmium,Dissolved	ND	F1	0.00200	1	05/05/2024 18:33	WG2279515
Calcium	265		1.00	1	05/07/2024 12:53	WG2280634
Calcium,Dissolved	232	F1	1.00	1	05/05/2024 18:33	WG2279515
Iron,Dissolved	ND	F1	0.100	1	05/05/2024 18:33	WG2279515
Lead,Dissolved	ND	F1	0.00600	1	05/05/2024 18:33	WG2279515
Magnesium	70.6		1.00	1	05/07/2024 12:53	WG2280634
Magnesium,Dissolved	65.8	F1	1.00	1	05/05/2024 18:33	WG2279515
Manganese,Dissolved	ND	F1	0.0100	1	05/05/2024 18:33	WG2279515
Molybdenum,Dissolved	ND	F1	0.00500	1	05/05/2024 18:33	WG2279515
Potassium,Dissolved	3.41	F1	2.00	1	05/05/2024 18:33	WG2279515
Selenium,Dissolved	0.0157	F1	0.0100	1	05/05/2024 18:33	WG2279515
Sodium	140		3.00	1	05/07/2024 12:53	WG2280634
Sodium,Dissolved	131	F1	3.00	1	05/05/2024 18:33	WG2279515

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Collected date/time: 04/30/24 15:15

SAMPLE RESULTS - 09

L1731373

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.33		1	05/07/2024 13:03	WG2280634

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	737		2.50	1	05/07/2024 13:03	WG2280634

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1240		20.0	1	05/02/2024 15:03	WG2278718

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	267		20.0	1	05/02/2024 12:09	WG2278748
Alkalinity,Bicarbonate	267		20.0	1	05/02/2024 12:09	WG2278748
Alkalinity,Carbonate	ND		20.0	1	05/02/2024 12:09	WG2278748
Alkalinity,Hydroxide	ND		20.0	1	05/02/2024 12:09	WG2278748

Sample Narrative:

L1731373-09 WG2278748: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	93.9		1.00	1	05/06/2024 09:43	WG2280616
Sulfate	226		50.0	10	05/06/2024 09:59	WG2280616

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND	F1	0.0100	1	05/05/2024 18:36	WG2279515
Barium,Dissolved	0.0941	F1	0.00500	1	05/05/2024 18:36	WG2279515
Cadmium,Dissolved	ND	F1	0.00200	1	05/05/2024 18:36	WG2279515
Calcium	204		1.00	1	05/07/2024 13:03	WG2280634
Calcium,Dissolved	180	F1	1.00	1	05/05/2024 18:36	WG2279515
Iron,Dissolved	ND	F1	0.100	1	05/05/2024 18:36	WG2279515
Lead,Dissolved	ND	F1	0.00600	1	05/05/2024 18:36	WG2279515
Magnesium	55.3		1.00	1	05/07/2024 13:03	WG2280634
Magnesium,Dissolved	52.0	F1	1.00	1	05/05/2024 18:36	WG2279515
Manganese,Dissolved	ND	F1	0.0100	1	05/05/2024 18:36	WG2279515
Molybdenum,Dissolved	ND	F1	0.00500	1	05/05/2024 18:36	WG2279515
Selenium,Dissolved	ND	F1	0.0100	1	05/05/2024 18:36	WG2279515
Sodium	83.2		3.00	1	05/07/2024 13:03	WG2280634
Sodium,Dissolved	76.8	F1	3.00	1	05/05/2024 18:36	WG2279515

DH-96

Collected date/time: 04/30/24 10:15

SAMPLE RESULTS - 10

L1731373

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.32		1	05/07/2024 13:07	WG2280634

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	483		2.50	1	05/07/2024 13:07	WG2280634

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1320		20.0	1	05/02/2024 15:03	WG2278718

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	301		20.0	1	05/02/2024 12:42	WG2278748
Alkalinity,Bicarbonate	301		20.0	1	05/02/2024 12:42	WG2278748
Alkalinity,Carbonate	ND		20.0	1	05/02/2024 12:42	WG2278748
Alkalinity,Hydroxide	ND		20.0	1	05/02/2024 12:42	WG2278748

Sample Narrative:

L1731373-10 WG2278748: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	32.3		1.00	1	05/06/2024 10:15	WG2280616
Sulfate	681		50.0	10	05/06/2024 11:03	WG2280616

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND	F1	0.0100	1	05/05/2024 18:40	WG2279515
Barium,Dissolved	0.0101	F1	0.00500	1	05/05/2024 18:40	WG2279515
Cadmium,Dissolved	ND	F1	0.00200	1	05/05/2024 18:40	WG2279515
Calcium	113		1.00	1	05/07/2024 13:07	WG2280634
Calcium,Dissolved	101	F1	1.00	1	05/05/2024 18:40	WG2279515
Iron,Dissolved	ND	F1	0.100	1	05/05/2024 18:40	WG2279515
Lead,Dissolved	ND	F1	0.00600	1	05/05/2024 18:40	WG2279515
Magnesium	49.1		1.00	1	05/07/2024 13:07	WG2280634
Magnesium,Dissolved	48.0	F1	1.00	1	05/05/2024 18:40	WG2279515
Manganese,Dissolved	0.513	F1	0.0100	1	05/05/2024 18:40	WG2279515
Molybdenum,Dissolved	0.00790	F1	0.00500	1	05/05/2024 18:40	WG2279515
Selenium,Dissolved	ND	F1	0.0100	1	05/05/2024 18:40	WG2279515
Sodium	269		3.00	1	05/07/2024 13:07	WG2280634
Sodium,Dissolved	250	F1	3.00	1	05/05/2024 18:40	WG2279515

DH-122

Collected date/time: 04/30/24 09:00

SAMPLE RESULTS - 11

L1731373

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.88		1	05/07/2024 13:11	WG2280634

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	742		2.50	1	05/07/2024 13:11	WG2280634

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1670		25.0	1	05/02/2024 15:03	WG2278718

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	307		20.0	1	05/02/2024 12:46	WG2278748
Alkalinity,Bicarbonate	307		20.0	1	05/02/2024 12:46	WG2278748
Alkalinity,Carbonate	ND		20.0	1	05/02/2024 12:46	WG2278748
Alkalinity,Hydroxide	ND		20.0	1	05/02/2024 12:46	WG2278748

Sample Narrative:

L1731373-11 WG2278748: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	117		1.00	1	05/06/2024 11:19	WG2280616
Sulfate	827		50.0	10	05/06/2024 11:35	WG2280616

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND	F1	0.0100	1	05/05/2024 18:44	WG2279515
Barium,Dissolved	0.0201	F1	0.00500	1	05/05/2024 18:44	WG2279515
Cadmium,Dissolved	ND	F1	0.00200	1	05/05/2024 18:44	WG2279515
Calcium	198		1.00	1	05/07/2024 13:11	WG2280634
Calcium,Dissolved	169	F1	1.00	1	05/05/2024 18:44	WG2279515
Iron,Dissolved	ND	F1	0.100	1	05/05/2024 18:44	WG2279515
Lead,Dissolved	ND	F1	0.00600	1	05/05/2024 18:44	WG2279515
Magnesium	60.3		1.00	1	05/07/2024 13:11	WG2280634
Magnesium,Dissolved	56.2	F1	1.00	1	05/05/2024 18:44	WG2279515
Manganese,Dissolved	0.383	F1	0.0100	1	05/05/2024 18:44	WG2279515
Molybdenum,Dissolved	0.00951	F1	0.00500	1	05/05/2024 18:44	WG2279515
Selenium,Dissolved	ND	F1	0.0100	1	05/05/2024 18:44	WG2279515
Sodium	306		3.00	1	05/07/2024 13:11	WG2280634
Sodium,Dissolved	277	F1	3.00	1	05/05/2024 18:44	WG2279515

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Collected date/time: 04/30/24 00:00

SAMPLE RESULTS - 12

L1731373

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	05/05/2024 23:34	WG2280790
Acrolein	ND		0.0500	1	05/05/2024 23:34	WG2280790
Acrylonitrile	ND		0.0100	1	05/05/2024 23:34	WG2280790
Benzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
Bromobenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
Bromodichloromethane	ND		0.00100	1	05/05/2024 23:34	WG2280790
Bromoform	ND		0.00100	1	05/05/2024 23:34	WG2280790
Bromomethane	ND		0.00500	1	05/05/2024 23:34	WG2280790
n-Butylbenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
sec-Butylbenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
tert-Butylbenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
Carbon tetrachloride	ND		0.00100	1	05/05/2024 23:34	WG2280790
Chlorobenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
Chlorodibromomethane	ND		0.00100	1	05/05/2024 23:34	WG2280790
Chloroethane	ND		0.00500	1	05/05/2024 23:34	WG2280790
Chloroform	ND		0.00500	1	05/05/2024 23:34	WG2280790
Chloromethane	ND		0.00250	1	05/05/2024 23:34	WG2280790
2-Chlorotoluene	ND		0.00100	1	05/05/2024 23:34	WG2280790
4-Chlorotoluene	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	05/05/2024 23:34	WG2280790
1,2-Dibromoethane	ND		0.00100	1	05/05/2024 23:34	WG2280790
Dibromomethane	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,2-Dichlorobenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,3-Dichlorobenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,4-Dichlorobenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
Dichlorodifluoromethane	ND		0.00500	1	05/05/2024 23:34	WG2280790
1,1-Dichloroethane	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,2-Dichloroethane	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,1-Dichloroethene	ND		0.00100	1	05/05/2024 23:34	WG2280790
cis-1,2-Dichloroethene	ND		0.00100	1	05/05/2024 23:34	WG2280790
trans-1,2-Dichloroethene	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,2-Dichloropropane	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,1-Dichloropropene	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,3-Dichloropropane	ND		0.00100	1	05/05/2024 23:34	WG2280790
cis-1,3-Dichloropropene	ND		0.00100	1	05/05/2024 23:34	WG2280790
trans-1,3-Dichloropropene	ND		0.00100	1	05/05/2024 23:34	WG2280790
2,2-Dichloropropane	ND		0.00100	1	05/05/2024 23:34	WG2280790
Di-isopropyl ether	ND		0.00100	1	05/05/2024 23:34	WG2280790
Ethylbenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
Hexachloro-1,3-butadiene	ND		0.00100	1	05/05/2024 23:34	WG2280790
Isopropylbenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
p-Isopropyltoluene	ND		0.00100	1	05/05/2024 23:34	WG2280790
2-Butanone (MEK)	ND		0.0100	1	05/05/2024 23:34	WG2280790
Methylene Chloride	ND		0.00500	1	05/05/2024 23:34	WG2280790
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	05/05/2024 23:34	WG2280790
Methyl tert-butyl ether	ND		0.00100	1	05/05/2024 23:34	WG2280790
Naphthalene	ND		0.00500	1	05/05/2024 23:34	WG2280790
n-Propylbenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
Styrene	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,1,1,2-Tetrachloroethane	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,1,2,2-Tetrachloroethane	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	05/05/2024 23:34	WG2280790
Tetrachloroethene	ND		0.00100	1	05/05/2024 23:34	WG2280790
Toluene	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,2,3-Trichlorobenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,2,4-Trichlorobenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790

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Collected date/time: 04/30/24 00:00

SAMPLE RESULTS - 12

L1731373

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,1,2-Trichloroethane	ND		0.00100	1	05/05/2024 23:34	WG2280790
Trichloroethene	ND		0.00100	1	05/05/2024 23:34	WG2280790
Trichlorofluoromethane	ND	<u>J4</u>	0.00500	1	05/05/2024 23:34	WG2280790
1,2,3-Trichloropropane	ND		0.00250	1	05/05/2024 23:34	WG2280790
1,2,4-Trimethylbenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,2,3-Trimethylbenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
1,3,5-Trimethylbenzene	ND		0.00100	1	05/05/2024 23:34	WG2280790
Vinyl chloride	ND		0.00100	1	05/05/2024 23:34	WG2280790
Xylenes, Total	ND		0.00300	1	05/05/2024 23:34	WG2280790
(S) Toluene-d8	106		80.0-120		05/05/2024 23:34	WG2280790
(S) 4-Bromofluorobenzene	87.4		77.0-126		05/05/2024 23:34	WG2280790
(S) 1,2-Dichloroethane-d4	119		70.0-130		05/05/2024 23:34	WG2280790

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4065704-1 05/02/24 15:03					
Analyte	MB Result	MB Qualifier	MB MDL	MB RDL	
	mg/l		mg/l	mg/l	
Dissolved Solids	U	J	10.0	10.0	

L1731400-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1731400-01 05/02/24 15:03 • (DUP) R4065704-3 05/02/24 15:03					
	Original Result	DUP Result	Dilution	DUP RPD	DUP RPD Limits
	mg/l	mg/l		%	%
Dissolved Solids	455	477	1	4.72	10

L1731400-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1731400-02 05/02/24 15:03 • (DUP) R4065704-4 05/02/24 15:03					
	Original Result	DUP Result	Dilution	DUP RPD	DUP RPD Limits
	mg/l	mg/l		%	%
Dissolved Solids	459	469	1	2.16	10

Laboratory Control Sample (LCS)

(LCS) R4065704-2 05/02/24 15:03					
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Dissolved Solids	8800	8550	97.2	85.0-115	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

WG2278752

Gravimetric Analysis by Method 2540 C-2011

QUALITY CONTROL SUMMARY

L1731373-02.04

Method Blank (MB)

(MB) R4065688-1 05/02/24 13:36					
Analyte	MB Result	MB Qualifier	MB MDL	MB RDL	
	mg/l		mg/l	mg/l	
Dissolved Solids	U		10.0	10.0	

L1731187-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1731187-01 05/02/24 13:36 • (DUP) R4065688-3 05/02/24 13:36					
	Original Result	DUP Result	Dilution	DUP RPD	DUP RPD Limits
	mg/l	mg/l		%	%
Dissolved Solids	14.0	15.0	1	6.90	10

L1731190-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1731190-01 05/02/24 13:36 • (DUP) R4065688-4 05/02/24 13:36					
	Original Result	DUP Result	Dilution	DUP RPD	DUP RPD Limits
	mg/l	mg/l		%	%
Dissolved Solids	351	353	1	0.568	10

Laboratory Control Sample (LCS)

(LCS) R4065688-2 05/02/24 13:36					
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Dissolved Solids	8800	8630	98.1	85.0-115	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

WG2278354

Wet Chemistry by Method 2320 B-2011

QUALITY CONTROL SUMMARY

L1731373-07

Method Blank (MB)

(MB) R4064913-2 05/02/24 08:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U	8.45	8.45	20.0
Alkalinity,Bicarbonate	U	8.45	8.45	20.0
Alkalinity,Carbonate	U	8.45	8.45	20.0
Alkalinity,Hydroxide	U	8.45	8.45	20.0

Sample Narrative:
BLANK: Endpoint pH 4.5

L1730363-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1730363-07 05/02/24 08:39 • (DUP) R4064913-3 05/02/24 08:43

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	ND	ND	1	0.000		20
Alkalinity,Bicarbonate	ND	ND	1	0.000		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace
DUP: Endpoint pH 4.5

L1731267-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1731267-03 05/02/24 10:26 • (DUP) R4064913-4 05/02/24 10:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	584	592	1	1.46		20
Alkalinity,Bicarbonate	584	592	1	1.46		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace
DUP: Endpoint pH 4.5

ACCOUNT:

PROJECT:

SDG:

DATE/TIME:

PAGE:

WG2278354

Wet Chemistry by Method 2320 B-2011

QUALITY CONTROL SUMMARY

L1731373-07

Laboratory Control Sample (LCS)

(LCS) R4064913-1 05/02/24 08:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	98.3	98.3	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

WG2278673

Wet Chemistry by Method 2320 B-2011

QUALITY CONTROL SUMMARY

L1731373-01.02.03.04.05.06

Method Blank (MB)

(MB) R4064916-2 05/02/24 09:05

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U	8.45	8.45	20.0
Alkalinity,Bicarbonate	U	8.45	8.45	20.0
Alkalinity,Carbonate	U	8.45	8.45	20.0
Alkalinity,Hydroxide	U	8.45	8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1729993-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1729993-06 05/02/24 09:17 • (DUP) R4064916-3 05/02/24 09:24

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	444	512	1	14.4		20
Alkalinity,Bicarbonate	444	512	1	14.4		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1731373-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1731373-06 05/02/24 11:22 • (DUP) R4064916-4 05/02/24 11:26

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	829	833	1	0.565		20
Alkalinity,Bicarbonate	829	833	1	0.565		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

WG2278673

Wet Chemistry by Method 2320 B-2011

Laboratory Control Sample (LCS)

(LCS) R4064916-1 05/02/24 08:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	108	108	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

QUALITY CONTROL SUMMARY

L1731373-01,02,03,04,05,06

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4065057-2 05/02/24 11:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		8.45	20.0
Alkalinity,Bicarbonate	U		8.45	20.0
Alkalinity,Carbonate	U		8.45	20.0
Alkalinity,Hydroxide	U		8.45	20.0

Sample Narrative:
BLANK: Endpoint pH 4.5

L1729664-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1729664-01 05/02/24 11:40 • (DUP) R4065057-4 05/02/24 11:45

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	532	523	1	1.53		20
Alkalinity,Bicarbonate	532	523	1	1.53		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1731580-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1731580-01 05/02/24 13:39 • (DUP) R4065057-6 05/02/24 13:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	81.8	81.6	1	0.263		20
Alkalinity,Bicarbonate	81.8	81.6	1	0.263		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

WG2278748

Wet Chemistry by Method 2320 B-2011

QUALITY CONTROL SUMMARY

L1731373-08,09,10,11

Laboratory Control Sample (LCS)

(LCS) R4065057-1 05/02/24 11:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	103	103	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

WG2280616

Wet Chemistry by Method 9056A

QUALITY CONTROL SUMMARY

L1731373-01,02,03,04,05,06,07,08,09,10,11

Method Blank (MB)

(MB) R4067146-1 05/05/24 23:52

Analyte	MB Result		MB Qualifier		MB MDL		MB RDL	
	mg/l		mg/l		mg/l		mg/l	
Chloride	0.475		↓		0.379		1.00	
Fluoride	U				0.0640		0.150	
Sulfate	0.650		↓		0.594		5.00	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1731279-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1731279-01 05/06/24 03:05 • (DUP) R4067146-3 05/06/24 03:21

Analyte	Original Result		DUP Result		Dilution		DUP RPD		DUP Qualifier		DUP RPD Limits	
	mg/l		mg/l				%				%	
Chloride	84.3		87.3		1		3.50				15	
Fluoride	0.875		0.894		1		2.15				15	
Sulfate	51.8		51.9		1		0.0789				15	

L1731382-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1731382-03 05/06/24 11:51 • (DUP) R4067146-6 05/06/24 12:07

Analyte	Original Result		DUP Result		Dilution		DUP RPD		DUP Qualifier		DUP RPD Limits	
	mg/l		mg/l				%				%	
Chloride	28.4		28.4		1		0.0461				15	
Fluoride	0.244		0.256		1		4.48				15	
Sulfate	42.6		42.4		1		0.557				15	

Laboratory Control Sample (LCS)

(LCS) R4067146-2 05/06/24 00:08

Analyte	Spike Amount		LCS Result		LCS Rec.		Rec. Limits		LCS Qualifier	
	mg/l		mg/l		%		%			
Chloride	40.0		39.1		97.7		80.0-120			
Fluoride	8.00		8.19		102		80.0-120			
Sulfate	40.0		38.8		97.0		80.0-120			

L1731279-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1731279-01 05/06/24 03:05 • (MS) R4067146-4 05/06/24 03:37 • (MSD) R4067146-5 05/06/24 03:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	84.3	111	111	65.8	66.0	1	80.0-120	J6	J6	0.0426	15
Fluoride	8.00	0.875	8.55	8.48	95.9	95.1	1	80.0-120	J6	J6	0.783	15
Sulfate	40.0	51.8	82.3	81.8	76.2	74.9	1	80.0-120	J6	J6	0.621	15

Sample Narrative:

MS: Spike failure due to matrix interference
MSD: Spike failure due to matrix interference

L1731382-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1731382-03 05/06/24 11:51 • (MS) R4067146-7 05/06/24 12:23

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40.0	28.4	63.1	86.9	1	80.0-120	
Fluoride	8.00	0.244	8.51	103	1	80.0-120	
Sulfate	40.0	42.6	75.2	81.5	1	80.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

WG2279515

Metals (ICP) by Method 6010B

Method Blank (MB)

QUALITY CONTROL SUMMARY

L1731373-01,02,03,04,05,06,07,08,09,10,11

(MB) R4065968-1 05/05/24 17:36

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony, Dissolved	U		0.00430	0.0100
Arsenic, Dissolved	U		0.00440	0.0100
Barium, Dissolved	U		0.000736	0.00500
Boron, Dissolved	U		0.0200	0.200
Cadmium, Dissolved	U		0.000479	0.00200
Calcium, Dissolved	U		0.0793	1.00
Iron, Dissolved	U		0.0180	0.100
Lead, Dissolved	U		0.00299	0.00600
Magnesium, Dissolved	U		0.0853	1.00
Manganese, Dissolved	U		0.000934	0.0100
Molybdenum, Dissolved	U		0.00116	0.00500
Potassium, Dissolved	U		0.261	2.00
Selenium, Dissolved	U		0.00735	0.0100
Sodium, Dissolved	U		0.504	3.00

Laboratory Control Sample (LCS)

(LCS) R4065968-2 05/05/24 17:39

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %
Antimony, Dissolved	1.00	0.990	99.0	80.0-120
Arsenic, Dissolved	1.00	0.989	98.9	80.0-120
Barium, Dissolved	1.00	0.976	97.6	80.0-120
Boron, Dissolved	1.00	0.936	93.6	80.0-120
Cadmium, Dissolved	1.00	0.963	96.3	80.0-120
Calcium, Dissolved	10.0	8.83	88.3	80.0-120
Iron, Dissolved	10.0	9.14	91.4	80.0-120
Lead, Dissolved	1.00	0.928	92.8	80.0-120
Magnesium, Dissolved	10.0	8.79	87.9	80.0-120
Manganese, Dissolved	1.00	0.919	91.9	80.0-120
Molybdenum, Dissolved	1.00	0.995	99.5	80.0-120
Potassium, Dissolved	10.0	9.53	95.3	80.0-120
Selenium, Dissolved	1.00	0.960	96.0	80.0-120
Sodium, Dissolved	10.0	8.84	88.4	80.0-120

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WG2279515

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1731373-01,02,03,04,05,06,07,08,09,10,11

L1731423-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1731423-12 05/05/24 17:43 • (MS) R4065968-4 05/05/24 17:50 • (MSD) R4065968-5 05/05/24 17:54

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony,Dissolved	1.00	ND	1.07	1.09	107	109	1	75.0-125			1.90	20
Arsenic,Dissolved	1.00	0.0539	1.13	1.16	108	110	1	75.0-125			2.30	20
Barium,Dissolved	1.00	0.494	1.46	1.48	96.2	98.2	1	75.0-125			1.33	20
Boron,Dissolved	1.00	1.31	2.21	2.19	90.3	88.4	1	75.0-125			0.835	20
Cadmium,Dissolved	1.00	ND	1.03	1.05	103	105	1	75.0-125			2.19	20
Calcium,Dissolved	10.0	57.1	65.5	64.5	84.6	74.5	1	75.0-125		V	1.56	20
Iron,Dissolved	10.0	3.58	12.8	12.8	92.6	92.6	1	75.0-125			0.00545	20
Lead,Dissolved	1.00	ND	0.956	0.967	95.6	96.7	1	75.0-125			1.10	20
Magnesium,Dissolved	10.0	70.5	79.6	78.2	90.7	77.1	1	75.0-125			1.73	20
Manganese,Dissolved	1.00	0.697	1.62	1.63	92.0	93.3	1	75.0-125			0.768	20
Molybdenum,Dissolved	1.00	ND	1.04	1.06	103	105	1	75.0-125			2.01	20
Potassium,Dissolved	10.0	ND	10.8	10.8	100	100	1	75.0-125			0.188	20
Selenium,Dissolved	1.00	ND	1.05	1.08	105	108	1	75.0-125			3.35	20
Sodium,Dissolved	10.0	304	311	304	66.1	0.000	1	75.0-125	V	V	2.18	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

WG2280634

Metals (ICP) by Method 6010B

Method Blank (MB)

QUALITY CONTROL SUMMARY

L1731373-01.02.03.04.05.06.07.08.09.10.11

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

(MB) R4066664-1 05/07/24 11:34				
Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium	U		0.0793	1.00
Magnesium	U		0.0853	1.00
Sodium	U		0.504	3.00

Laboratory Control Sample (LCS)

(LCS) R4066664-2 05/07/24 11:37				
Analyte	Spike Amount mg/l	LCS Qualifier		
		LCS Result mg/l	LCS Rec. %	Rec. Limits %
Calcium	10.0	9.50	95.0	80.0-120
Magnesium	10.0	9.65	96.5	80.0-120
Sodium	10.0	9.56	95.6	80.0-120

L1731979-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1731979-02 05/07/24 11:41 • (MS) R4066664-4 05/07/24 11:48 • (MSD) R4066664-5 05/07/24 11:51									
Analyte	Spike Amount mg/l	Original Result			MS Result			MSD Result	
		mg/l	MS Rec. %	Dilution	mg/l	MS Rec. %	Rec. Limits %	mg/l	MSD Rec. %
Calcium	10.0	72.9	82.0	1	82.0	90.9	75.0-125	82.0	90.4
Magnesium	10.0	13.5	22.9	1	22.9	93.7	75.0-125	22.9	93.6
Sodium	10.0	34.4	44.0	1	43.8	96.0	75.0-125	43.8	94.3
					MSD Qualifier		RPD	RPD Limits	
							%		
							0.0558	20	
							0.0301	20	
							0.395	20	

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Volatile Organic Compounds (GC/MS) by Method 8260B

QUALITY CONTROL SUMMARY

L1731373-12

Method Blank (MB)

(MB) R4066615-3 05/05/24 20:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Acrolein	U		0.00254	0.0500
Acrylonitrile	U		0.000671	0.0100
Benzene	U		0.0000941	0.00100
Bromobenzene	U		0.000118	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
2-Chlorotoluene	U		0.000106	0.00100
4-Chlorotoluene	U		0.000114	0.00100
1,2-Dibromo-3-Chloropropane	U		0.000276	0.00500
1,2-Dibromoethane	U		0.000126	0.00100
Dibromomethane	U		0.000122	0.00100
1,2-Dichlorobenzene	U		0.000107	0.00100
1,3-Dichlorobenzene	U		0.000110	0.00100
1,4-Dichlorobenzene	U		0.000120	0.00100
Dichlorodifluoromethane	U		0.000374	0.00500
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
1,1-Dichloropropene	U		0.000142	0.00100
1,3-Dichloropropane	U		0.000110	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
2,2-Dichloropropane	U		0.000161	0.00100
Di-isopropyl ether	U		0.000105	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100

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Volatile Organic Compounds (GC/MS) by Method 8260B

QUALITY CONTROL SUMMARY

L1731373-12

Method Blank (MB)

(MB) R4066615-3 05/05/24 20:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000180	0.00100
Tetrachloroethane	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000481	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
Trichlorofluoromethane	U		0.000160	0.00500
1,2,3-Trichloropropane	U		0.000237	0.00250
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,2,3-Trimethylbenzene	U		0.000104	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	106			80.0-120
(S) 4-Bromofluorobenzene	89.8			77.0-126
(S) 1,2-Dichloroethane-d4	114			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4066615-1 05/05/24 19:04 • (LCSD) R4066615-2 05/05/24 19:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.0250	0.0235	0.0294	94.0	118	19.0-160				
Acrolein	0.0250	0.0156	0.0147	62.4	58.8	10.0-160			22.3	27
Acrylonitrile	0.0250	0.0238	0.0268	95.2	107	55.0-149			5.94	26
Benzene	0.00500	0.00477	0.00481	95.4	96.2	70.0-123			11.9	20
									0.835	20

ACCOUNT:

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Volatile Organic Compounds (GC/MS) by Method 8260B

QUALITY CONTROL SUMMARY

L1731373-12

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4066615-1 05/05/24 19:04 • (LCSD) R4066615-2 05/05/24 19:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCSD Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromobenzene	0.00500	0.00446	0.00431	89.2	86.2	73.0-121			3.42	20
Bromodichloromethane	0.00500	0.00508	0.00515	102	103	75.0-120			1.37	20
Bromoform	0.00500	0.00605	0.00603	121	121	68.0-132			0.331	20
Bromomethane	0.00500	0.00613	0.00596	123	119	10.0-160			2.81	25
n-Butylbenzene	0.00500	0.00461	0.00396	92.2	77.2	73.0-125			17.7	20
sec-Butylbenzene	0.00500	0.00465	0.00412	93.0	82.4	75.0-125			12.1	20
tert-Butylbenzene	0.00500	0.00479	0.00399	95.8	79.8	76.0-124			18.2	20
Carbon tetrachloride	0.00500	0.00590	0.00526	116	105	68.0-126			9.76	20
Chlorobenzene	0.00500	0.00546	0.00527	109	105	80.0-121			3.54	20
Chlorodibromomethane	0.00500	0.00529	0.00530	106	106	77.0-125			0.189	20
Chloroethane	0.00500	0.00550	0.00571	110	114	47.0-150			3.75	20
Chloroform	0.00500	0.00524	0.00505	105	101	73.0-120			3.69	20
Chloromethane	0.00500	0.00590	0.00579	118	116	41.0-142			1.88	20
2-Chlorotoluene	0.00500	0.00459	0.00464	91.8	92.8	76.0-123			1.08	20
4-Chlorotoluene	0.00500	0.00439	0.00418	87.8	83.6	75.0-122			4.90	20
1,2-Dibromo-3-Chloropropane	0.00500	0.00445	0.00485	89.0	97.0	58.0-134			8.60	20
1,2-Dibromoethane	0.00500	0.00533	0.00519	107	104	80.0-122			2.66	20
Dibromomethane	0.00500	0.00518	0.00536	104	107	80.0-120			3.42	20
1,2-Dichlorobenzene	0.00500	0.00547	0.00525	109	105	79.0-121			4.10	20
1,3-Dichlorobenzene	0.00500	0.00558	0.00505	112	101	79.0-120			9.97	20
1,4-Dichlorobenzene	0.00500	0.00528	0.00510	106	102	79.0-120			3.47	20
Dichlorodifluoromethane	0.00500	0.00601	0.00576	120	115	51.0-149			4.25	20
1,1-Dichloroethane	0.00500	0.00507	0.00491	101	98.2	70.0-126			3.21	20
1,2-Dichloroethane	0.00500	0.00574	0.00585	115	117	70.0-128			1.90	20
1,1-Dichloroethene	0.00500	0.00492	0.00476	98.4	95.2	71.0-124			3.31	20
cis-1,2-Dichloroethene	0.00500	0.00501	0.00489	100	97.8	73.0-120			2.42	20
trans-1,2-Dichloroethene	0.00500	0.00450	0.00481	90.0	96.2	73.0-120			6.66	20
1,2-Dichloropropane	0.00500	0.00502	0.00488	100	97.6	77.0-125			2.83	20
1,1-Dichloropropene	0.00500	0.00518	0.00471	104	94.2	74.0-126			9.50	20
1,3-Dichloropropane	0.00500	0.00486	0.00469	97.2	93.8	80.0-120			3.56	20
cis-1,3-Dichloropropene	0.00500	0.00486	0.00498	97.2	99.6	80.0-123			2.44	20
trans-1,3-Dichloropropene	0.00500	0.00473	0.00469	94.6	93.8	78.0-124			0.849	20
2,2-Dichloropropane	0.00500	0.00495	0.00424	99.0	84.8	58.0-130			15.5	20
Di-isopropyl ether	0.00500	0.00527	0.00509	105	102	58.0-138			3.47	20
Ethylbenzene	0.00500	0.00533	0.00503	107	101	79.0-123			5.79	20
Hexachloro-1,3-butadiene	0.00500	0.00644	0.00586	129	117	54.0-138			9.43	20
Isopropylbenzene	0.00500	0.00513	0.00483	103	96.6	76.0-127			6.02	20
p-Isopropyltoluene	0.00500	0.00448	0.00392	89.6	78.4	76.0-125			13.3	20
2-Butanone (MEK)	0.0250	0.0262	0.0301	105	120	44.0-160			13.9	20
Methylene Chloride	0.00500	0.00483	0.00494	96.6	98.8	67.0-120			2.25	20

ACCOUNT:

PROJECT:

SDG:

DATE/TIME:

PAGE:

WG2280790

Volatile Organic Compounds (GC/MS) by Method 8260B

QUALITY CONTROL SUMMARY

L1731373-12

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4066615-1 05/05/24 19:04 • (LCSD) R4066615-2 05/05/24 19:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	0.0250	0.0272	0.0273	109	109	68.0-142			0.367	20
Methyl tert-butyl ether	0.00500	0.00461	0.00479	92.2	95.8	68.0-125			3.83	20
Naphthalene	0.00500	0.00386	0.00398	77.2	79.6	54.0-135			3.06	20
n-Propylbenzene	0.00500	0.00446	0.00405	89.2	81.0	77.0-124			9.64	20
Styrene	0.00500	0.00489	0.00450	97.8	90.0	73.0-130			8.31	20
1,1,1,2-Tetrachloroethane	0.00500	0.00568	0.00540	114	108	75.0-125			5.05	20
1,1,2,2-Tetrachloroethane	0.00500	0.00449	0.00432	89.8	86.4	65.0-130			3.86	20
1,1,2-Trichlorotrifluoroethane	0.00500	0.00594	0.00544	119	109	69.0-132			8.79	20
Tetrachloroethene	0.00500	0.00607	0.00592	121	118	72.0-132			2.50	20
Toluene	0.00500	0.00499	0.00489	99.8	97.8	79.0-120			2.02	20
1,2,3-Trichlorobenzene	0.00500	0.00545	0.00509	109	102	50.0-138			6.83	20
1,2,4-Trichlorobenzene	0.00500	0.00554	0.00500	111	100	57.0-137			10.2	20
1,1,1-Trichloroethane	0.00500	0.00588	0.00548	118	110	73.0-124			7.04	20
1,1,2-Trichloroethane	0.00500	0.00518	0.00524	104	105	80.0-120			1.15	20
Trichloroethene	0.00500	0.00536	0.00549	107	110	78.0-124			2.40	20
Trichlorofluoromethane	0.00500	0.00836	0.00785	167	157	59.0-147	J4	J4	6.29	20
1,2,3-Trichloropropane	0.00500	0.00514	0.00480	103	96.0	73.0-130			6.84	20
1,2,4-Trimethylbenzene	0.00500	0.00444	0.00406	88.8	81.2	76.0-121			8.94	20
1,2,3-Trimethylbenzene	0.00500	0.00477	0.00444	95.4	88.8	77.0-120			7.17	20
1,3,5-Trimethylbenzene	0.00500	0.00440	0.00421	88.0	84.2	76.0-122			4.41	20
Vinyl chloride	0.00500	0.00552	0.00528	110	106	67.0-131			4.44	20
Xylenes, Total	0.0150	0.0155	0.0144	103	96.0	79.0-123			7.36	20
(S) Toluene-d8				108	106	80.0-120				
(S) 4-Bromofluorobenzene				96.6	95.9	77.0-126				
(S) 1,2-Dichloroethane-d4				108	108	70.0-130				

ACCOUNT:

PROJECT:

SDG:

DATE/TIME:

PAGE:

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
F1	Sample filtration was performed in the laboratory.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-05-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1*}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	AZLA
A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

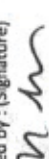
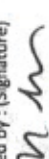
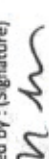
⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Company Name/Address: American Environmental - CO 8191 Southpark Lane Suite 107 Littleton, CO 80120 Report to: Ryan Smith Project Description: Keenesburg Mine Phone: 303-948-7733		Billing Information: Accounts Payable 8191 Southpark Lane Suite 107 Littleton, CO 80120 Email To: rsmith@aecdenver.com; cahrendsen@aecdenvie		Chain of Custody Page <u> 1 </u> of <u> 1 </u>  MT JULIET, TN 12065 Lebanon Rd. Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacedata.com/subs/ps-standards-terms.pdf SDG # <u>4735373</u> B225	
Client Project # Coors Energy City/State Keenesburg, CO Collected: City/State: Keenesburg, CO P.O. # Quote # Date Results Needed No. of Cntrs		Lab Project # AMEENVLCO-KEENESBURG Site/Facility ID # Keenesburg Ash Rush? (Lab MUST Be Notified) Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day ☐		Sample ID Sample # (lab only) Shipped Via: FedEx Ground Remarks	
Comp/Grab Matrix* Depth Date Time		Analysis / Container / Preservative ALKBI, ALKCA 250mHDP-NOPres Cl, F, SO4 125mHDP-NOPres Diss Metals 250mHDP-NOPres HARD 250mHDP-NO3 SAR 250mHDP-NO3 TDS 1L-HDPE-NOPres V8260 40mIamb-HCl-Bik		Remarks -01 -02 -03 -04 -05 -06 -07 -08 -09	
Sample ID PC-1 PC-2 PC-5 PC-6 AMW-1 AMW-2 SMW-2 DUP FPW		Comp/Grab Matrix* Depth Date Time		Analysis / Container / Preservative ALKBI, ALKCA 250mHDP-NOPres Cl, F, SO4 125mHDP-NOPres Diss Metals 250mHDP-NOPres HARD 250mHDP-NO3 SAR 250mHDP-NO3 TDS 1L-HDPE-NOPres V8260 40mIamb-HCl-Bik	
Matrix: SS - Soil GW - Groundwater WW - Waste/Water DW - Drinking Water OT - Other		Remarks: Diss Metals=As, Ba, B, Cd, Fe, Kd, Mg, Mn, Na, Pb, Sb, Se PC-1, PC-2, PC-6, AMW-1, AMW-2, SMW-2: Fluoride, SBDICP, BDICP, KDICP AMW-1, AMW-2, SMW-2, FPW, DH-96, DH-122: ALKOH, ALK		Sample Receipt Checklist COC Seal Present/Intact: ☒ Y ☐ N COC Signed/Accurate: ☒ Y ☐ N Bottles arrive intact: ☒ Y ☐ N Correct bottles used: ☒ Y ☐ N Sufficient volume sent: ☒ Y ☐ N IF Applicable VOA Zero Headspace: ☒ Y ☐ N Preservation Correct/Checked: ☒ Y ☐ N RAD Screen <0.5 mR/hr: ☒ Y ☐ N	
Relinquished by: (Signature) 		Date: 4/30/24 Time: 15:45		Received by: (Signature) 	
Relinquished by: (Signature) 		Date: 4/30/24 Time: 15:45		Received by: (Signature) 	
Relinquished by: (Signature) 		Date: 4/30/24 Time: 15:45		Received by: (Signature) 	

[illegible]

L1731373

[illegible]

Name

Date _____

ATTACHMENT 3.2

OCTOBER 2024 REPORT



ANALYTICAL REPORT

November 06, 2024

American Environmental - CO

Sample Delivery Group: L1792306
Samples Received: 10/24/2024
Project Number:
Description: Keenesburg Mine
Site: KEENESBURG MINE
Report To: Ryan Smith
8191 Southpark Lane
Suite 107
Littleton, CO 80120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Entire Report Reviewed By:

Chris Ward

Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

ACCOUNT:
American Environmental - CO

PROJECT:

SDG:
L1792306

DATE/TIME:
11/06/24 12:28

PAGE:
1 of 37

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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SAMPLE SUMMARY

PC-1 L1792306-01 GW

Collected by
David Sandeno

Collected date/time
10/22/24 09:00

Received date/time
10/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2391385	1	11/05/24 19:39	11/05/24 19:39	MAP	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2390937	1	10/28/24 13:46	10/28/24 16:30	DLS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2389329	1	10/25/24 10:48	10/25/24 10:48	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	1	10/28/24 11:23	10/28/24 11:23	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2391571	20	10/30/24 17:53	10/30/24 17:53	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	1	11/04/24 13:09	11/04/24 18:43	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391385	1	11/04/24 21:47	11/05/24 19:39	MAP	Mt. Juliet, TN

PC-2 L1792306-02 GW

Collected by
David Sandeno

Collected date/time
10/22/24 10:15

Received date/time
10/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2391385	1	11/05/24 20:31	11/05/24 20:31	MAP	Mt. Juliet, TN
Calculated Results	WG2391385	1	11/05/24 19:41	11/05/24 19:41	MAP	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2389053	1	10/24/24 17:57	10/24/24 22:57	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2389329	1	10/25/24 10:53	10/25/24 10:53	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	5	10/28/24 13:10	10/28/24 13:10	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	50	10/28/24 13:28	10/28/24 13:28	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	1	11/04/24 13:09	11/04/24 18:46	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	5	11/04/24 13:09	11/04/24 19:40	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391385	1	11/04/24 21:47	11/05/24 19:41	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391385	5	11/04/24 21:47	11/05/24 20:31	MAP	Mt. Juliet, TN

PC-5 L1792306-03 GW

Collected by
David Sandeno

Collected date/time
10/21/24 15:45

Received date/time
10/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2391386	1	11/03/24 19:25	11/03/24 19:25	JTM	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2389053	1	10/24/24 17:57	10/24/24 22:57	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2389327	1	10/25/24 17:21	10/25/24 17:21	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	1	10/28/24 13:46	10/28/24 13:46	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	10	10/28/24 14:04	10/28/24 14:04	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	1	11/04/24 13:09	11/04/24 18:50	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391386	1	11/02/24 22:12	11/03/24 19:25	JTM	Mt. Juliet, TN

PC-6 L1792306-04 GW

Collected by
David Sandeno

Collected date/time
10/21/24 15:00

Received date/time
10/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2391386	1	11/03/24 19:27	11/03/24 19:27	JTM	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2389053	1	10/24/24 17:57	10/24/24 22:57	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2389329	1	10/25/24 10:58	10/25/24 10:58	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	1	10/28/24 15:16	10/28/24 15:16	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	10	10/28/24 15:34	10/28/24 15:34	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	1	11/04/24 13:09	11/04/24 18:53	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391386	1	11/02/24 22:12	11/03/24 19:27	JTM	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

SAMPLE SUMMARY

AMW-1 L1792306-05 GW

Collected by
David Sandeno

Collected date/time
10/21/24 14:30

Received date/time
10/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2391386	1	11/03/24 19:28	11/03/24 19:28	JTM	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2389053	1	10/24/24 17:57	10/24/24 22:57	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2389313	1	10/25/24 11:29	10/25/24 11:29	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	1	10/28/24 15:52	10/28/24 15:52	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	10	10/28/24 16:10	10/28/24 16:10	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	1	11/04/24 13:09	11/04/24 18:56	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391386	1	11/02/24 22:12	11/03/24 19:28	JTM	Mt. Juliet, TN

AMW-2 L1792306-06 GW

Collected by
David Sandeno

Collected date/time
10/22/24 09:45

Received date/time
10/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2391386	1	11/04/24 14:14	11/04/24 14:14	JTM	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2389053	1	10/24/24 17:57	10/24/24 22:57	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2389329	1	10/25/24 11:16	10/25/24 11:16	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	5	10/28/24 17:03	10/28/24 17:03	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	50	10/28/24 17:21	10/28/24 17:21	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	1	11/04/24 13:09	11/04/24 18:59	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	5	11/04/24 13:09	11/04/24 19:43	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391386	5	11/02/24 22:12	11/04/24 14:14	JTM	Mt. Juliet, TN

SMW-2 L1792306-07 GW

Collected by
David Sandeno

Collected date/time
10/22/24 12:15

Received date/time
10/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2391386	1	11/04/24 14:16	11/04/24 14:16	JTM	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2389053	1	10/24/24 17:57	10/24/24 22:57	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2389313	1	10/25/24 12:06	10/25/24 12:06	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	1	10/28/24 17:39	10/28/24 17:39	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	10	10/28/24 17:57	10/28/24 17:57	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2391571	20	10/30/24 18:10	10/30/24 18:10	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	1	11/04/24 13:09	11/04/24 19:08	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	5	11/04/24 13:09	11/04/24 19:46	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391386	5	11/02/24 22:12	11/04/24 14:16	JTM	Mt. Juliet, TN

DUP L1792306-08 GW

Collected by
David Sandeno

Collected date/time
10/21/24 14:45

Received date/time
10/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2391386	1	11/03/24 19:37	11/03/24 19:37	JTM	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2389053	1	10/24/24 17:57	10/24/24 22:57	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2389327	1	10/25/24 17:35	10/25/24 17:35	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	1	10/28/24 18:15	10/28/24 18:15	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	10	10/28/24 18:33	10/28/24 18:33	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	1	11/04/24 13:09	11/04/24 19:11	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391386	1	11/02/24 22:12	11/03/24 19:37	JTM	Mt. Juliet, TN

SAMPLE SUMMARY

FPW L1792306-09 GW

Collected by
David Sandeno

Collected date/time
10/22/24 15:00

Received date/time
10/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2391386	1	11/03/24 19:39	11/03/24 19:39	JTM	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2389053	1	10/24/24 17:57	10/24/24 22:57	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2389329	1	10/25/24 11:20	10/25/24 11:20	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	1	10/28/24 18:51	10/28/24 18:51	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	10	10/28/24 19:09	10/28/24 19:09	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	1	11/04/24 13:09	11/04/24 19:14	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391386	1	11/02/24 22:12	11/03/24 19:39	JTM	Mt. Juliet, TN

DH-96 L1792306-10 GW

Collected by
David Sandeno

Collected date/time
10/22/24 13:45

Received date/time
10/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2391386	1	11/03/24 19:40	11/03/24 19:40	JTM	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2389053	1	10/24/24 17:57	10/24/24 22:57	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2389329	1	10/25/24 11:25	10/25/24 11:25	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	1	10/28/24 19:27	10/28/24 19:27	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	10	10/28/24 19:44	10/28/24 19:44	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	1	11/04/24 13:09	11/04/24 19:17	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391386	1	11/02/24 22:12	11/03/24 19:40	JTM	Mt. Juliet, TN

DH-122 L1792306-11 GW

Collected by
David Sandeno

Collected date/time
10/22/24 16:45

Received date/time
10/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2391386	1	11/03/24 19:42	11/03/24 19:42	JTM	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2389053	1	10/24/24 17:57	10/24/24 22:57	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2389329	1	10/25/24 11:31	10/25/24 11:31	KA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	1	10/28/24 20:38	10/28/24 20:38	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2389043	10	10/28/24 20:56	10/28/24 20:56	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391367	1	11/04/24 13:09	11/04/24 19:20	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2391386	1	11/02/24 22:12	11/03/24 19:42	JTM	Mt. Juliet, TN

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris Ward
Project Manager

Sample Delivery Group (SDG) Narrative

Analysis was filtered in the laboratory.

Lab Sample ID	Project Sample ID	Method
L1792306-01	PC-1	6010B
L1792306-02	PC-2	6010B
L1792306-03	PC-5	6010B
L1792306-04	PC-6	6010B
L1792306-05	AMW-1	6010B
L1792306-06	AMW-2	6010B
L1792306-07	SMW-2	6010B
L1792306-08	DUP	6010B
L1792306-09	FPW	6010B
L1792306-10	DH-96	6010B
L1792306-11	DH-122	6010B

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

PC-1

Collected date/time: 10/22/24 09:00

SAMPLE RESULTS - 01

L1792306

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.48		1	11/05/2024 19:39	WG2391385

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	1580		2.50	1	11/05/2024 19:39	WG2391385

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	3260		50.0	1	10/28/2024 16:30	WG2390937

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	301		20.0	1	10/25/2024 10:48	WG2389329
Alkalinity,Carbonate	ND		20.0	1	10/25/2024 10:48	WG2389329

Sample Narrative:

L1792306-01 WG2389329: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	17.8		1.00	1	10/28/2024 11:23	WG2389043
Fluoride	1.37		0.150	1	10/28/2024 11:23	WG2389043
Sulfate	2120		100	20	10/30/2024 17:53	WG2391571

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	11/04/2024 18:43	WG2391367
Arsenic,Dissolved	ND		0.0100	1	11/04/2024 18:43	WG2391367
Barium,Dissolved	0.0116		0.00500	1	11/04/2024 18:43	WG2391367
Boron,Dissolved	0.532		0.200	1	11/04/2024 18:43	WG2391367
Cadmium,Dissolved	ND		0.00200	1	11/04/2024 18:43	WG2391367
Calcium	479		1.00	1	11/05/2024 19:39	WG2391385
Calcium,Dissolved	486		1.00	1	11/04/2024 18:43	WG2391367
Iron,Dissolved	ND		0.100	1	11/04/2024 18:43	WG2391367
Lead,Dissolved	ND		0.00600	1	11/04/2024 18:43	WG2391367
Magnesium	92.8		1.00	1	11/05/2024 19:39	WG2391385
Magnesium,Dissolved	91.6		1.00	1	11/04/2024 18:43	WG2391367
Manganese,Dissolved	ND		0.0100	1	11/04/2024 18:43	WG2391367
Molybdenum,Dissolved	ND		0.00500	1	11/04/2024 18:43	WG2391367
Potassium,Dissolved	11.6		2.00	1	11/04/2024 18:43	WG2391367
Selenium,Dissolved	0.0773		0.0100	1	11/04/2024 18:43	WG2391367
Sodium	409		3.00	1	11/05/2024 19:39	WG2391385
Sodium,Dissolved	418		3.00	1	11/04/2024 18:43	WG2391367

PC-2

Collected date/time: 10/22/24 10:15

SAMPLE RESULTS - 02

L1792306

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	21.4		1	11/05/2024 20:31	WG2391385

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	2530		2.50	1	11/05/2024 19:41	WG2391385

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	8340		200	1	10/24/2024 22:57	WG2389053

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	915		20.0	1	10/25/2024 10:53	WG2389329
Alkalinity,Carbonate	ND		20.0	1	10/25/2024 10:53	WG2389329

Sample Narrative:

L1792306-02 WG2389329: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	884		5.00	5	10/28/2024 13:10	WG2389043
Fluoride	ND		0.750	5	10/28/2024 13:10	WG2389043
Sulfate	5900		250	50	10/28/2024 13:28	WG2389043

Sample Narrative:

L1792306-02 WG2389043: Dilution due to matrix impact on instrumentation at lower dilution

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	11/04/2024 18:46	WG2391367
Arsenic,Dissolved	ND		0.0100	1	11/04/2024 18:46	WG2391367
Barium,Dissolved	0.0116		0.00500	1	11/04/2024 18:46	WG2391367
Boron,Dissolved	0.287		0.200	1	11/04/2024 18:46	WG2391367
Cadmium,Dissolved	ND		0.00200	1	11/04/2024 18:46	WG2391367
Calcium	442		1.00	1	11/05/2024 19:41	WG2391385
Calcium,Dissolved	457		1.00	1	11/04/2024 18:46	WG2391367
Iron,Dissolved	ND		0.100	1	11/04/2024 18:46	WG2391367
Lead,Dissolved	ND		0.00600	1	11/04/2024 18:46	WG2391367
Magnesium	345		1.00	1	11/05/2024 19:41	WG2391385
Magnesium,Dissolved	350		1.00	1	11/04/2024 18:46	WG2391367
Manganese,Dissolved	2.18		0.0100	1	11/04/2024 18:46	WG2391367
Molybdenum,Dissolved	ND		0.00500	1	11/04/2024 18:46	WG2391367
Potassium,Dissolved	23.6		2.00	1	11/04/2024 18:46	WG2391367
Selenium,Dissolved	0.0131		0.0100	1	11/04/2024 18:46	WG2391367
Sodium	2410		15.0	5	11/05/2024 20:31	WG2391385
Sodium,Dissolved	2620		15.0	5	11/04/2024 19:40	WG2391367

ACCOUNT:

American Environmental - CO

PROJECT:

SDG:

L1792306

DATE/TIME:

11/06/24 12:28

PAGE:

8 of 37

PC-5

Collected date/time: 10/21/24 15:45

SAMPLE RESULTS - 03

L1792306

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.55		1	11/03/2024 19:25	WG2391386

Calculated Results

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	2080		2.50	1	11/03/2024 19:25	WG2391386

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	3480		50.0	1	10/24/2024 22:57	WG2389053

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	610		20.0	1	10/25/2024 17:21	WG2389327
Alkalinity,Carbonate	ND		20.0	1	10/25/2024 17:21	WG2389327

Sample Narrative:

L1792306-03 WG2389327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	140	J6	1.00	1	10/28/2024 13:46	WG2389043
Fluoride	ND		0.150	1	10/28/2024 13:46	WG2389043
Sulfate	1970		50.0	10	10/28/2024 14:04	WG2389043

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	11/04/2024 18:50	WG2391367
Arsenic,Dissolved	ND		0.0100	1	11/04/2024 18:50	WG2391367
Barium,Dissolved	0.0344		0.00500	1	11/04/2024 18:50	WG2391367
Boron,Dissolved	ND		0.200	1	11/04/2024 18:50	WG2391367
Cadmium,Dissolved	ND		0.00200	1	11/04/2024 18:50	WG2391367
Calcium	580		1.00	1	11/03/2024 19:25	WG2391386
Calcium,Dissolved	590		1.00	1	11/04/2024 18:50	WG2391367
Iron,Dissolved	ND		0.100	1	11/04/2024 18:50	WG2391367
Lead,Dissolved	ND		0.00600	1	11/04/2024 18:50	WG2391367
Magnesium	154		1.00	1	11/03/2024 19:25	WG2391386
Magnesium,Dissolved	157		1.00	1	11/04/2024 18:50	WG2391367
Manganese,Dissolved	19.6		0.0100	1	11/04/2024 18:50	WG2391367
Molybdenum,Dissolved	ND		0.00500	1	11/04/2024 18:50	WG2391367
Potassium,Dissolved	19.7		2.00	1	11/04/2024 18:50	WG2391367
Selenium,Dissolved	0.0206		0.0100	1	11/04/2024 18:50	WG2391367
Sodium	268		3.00	1	11/03/2024 19:25	WG2391386
Sodium,Dissolved	279		3.00	1	11/04/2024 18:50	WG2391367

PC-6

Collected date/time: 10/21/24 15:00

SAMPLE RESULTS - 04

L1792306

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	7.00		1	11/03/2024 19:27	WG2391386

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	759		2.50	1	11/03/2024 19:27	WG2391386

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	2130		50.0	1	10/24/2024 22:57	WG2389053

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	319		20.0	1	10/25/2024 10:58	WG2389329
Alkalinity,Carbonate	ND		20.0	1	10/25/2024 10:58	WG2389329

Sample Narrative:

L1792306-04 WG2389329: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	54.8		1.00	1	10/28/2024 15:16	WG2389043
Fluoride	2.46		0.150	1	10/28/2024 15:16	WG2389043
Sulfate	1320		50.0	10	10/28/2024 15:34	WG2389043

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	11/04/2024 18:53	WG2391367
Arsenic,Dissolved	ND		0.0100	1	11/04/2024 18:53	WG2391367
Barium,Dissolved	0.00827		0.00500	1	11/04/2024 18:53	WG2391367
Boron,Dissolved	0.577		0.200	1	11/04/2024 18:53	WG2391367
Cadmium,Dissolved	ND		0.00200	1	11/04/2024 18:53	WG2391367
Calcium	173		1.00	1	11/03/2024 19:27	WG2391386
Calcium,Dissolved	178		1.00	1	11/04/2024 18:53	WG2391367
Iron,Dissolved	ND		0.100	1	11/04/2024 18:53	WG2391367
Lead,Dissolved	ND		0.00600	1	11/04/2024 18:53	WG2391367
Magnesium	79.2		1.00	1	11/03/2024 19:27	WG2391386
Magnesium,Dissolved	79.5		1.00	1	11/04/2024 18:53	WG2391367
Manganese,Dissolved	0.0199		0.0100	1	11/04/2024 18:53	WG2391367
Molybdenum,Dissolved	ND		0.00500	1	11/04/2024 18:53	WG2391367
Potassium,Dissolved	7.56		2.00	1	11/04/2024 18:53	WG2391367
Selenium,Dissolved	0.0753		0.0100	1	11/04/2024 18:53	WG2391367
Sodium	443		3.00	1	11/03/2024 19:27	WG2391386
Sodium,Dissolved	461		3.00	1	11/04/2024 18:53	WG2391367

AMW-1

Collected date/time: 10/21/24 14:30

SAMPLE RESULTS - 05

L1792306

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.06		1	11/03/2024 19:28	WG2391386

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	872		2.50	1	11/03/2024 19:28	WG2391386

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1740		25.0	1	10/24/2024 22:57	WG2389053

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	191		20.0	1	10/25/2024 11:29	WG2389313
Alkalinity,Bicarbonate	191		20.0	1	10/25/2024 11:29	WG2389313
Alkalinity,Carbonate	ND		20.0	1	10/25/2024 11:29	WG2389313
Alkalinity,Hydroxide	ND		20.0	1	10/25/2024 11:29	WG2389313

Sample Narrative:

L1792306-05 WG2389313: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	26.2		1.00	1	10/28/2024 15:52	WG2389043
Fluoride	0.785		0.150	1	10/28/2024 15:52	WG2389043
Sulfate	863		50.0	10	10/28/2024 16:10	WG2389043

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	11/04/2024 18:56	WG2391367
Arsenic,Dissolved	ND		0.0100	1	11/04/2024 18:56	WG2391367
Barium,Dissolved	0.0249		0.00500	1	11/04/2024 18:56	WG2391367
Boron,Dissolved	ND		0.200	1	11/04/2024 18:56	WG2391367
Cadmium,Dissolved	ND		0.00200	1	11/04/2024 18:56	WG2391367
Calcium	244		1.00	1	11/03/2024 19:28	WG2391386
Calcium,Dissolved	262		1.00	1	11/04/2024 18:56	WG2391367
Iron,Dissolved	ND		0.100	1	11/04/2024 18:56	WG2391367
Lead,Dissolved	ND		0.00600	1	11/04/2024 18:56	WG2391367
Magnesium	64.1		1.00	1	11/03/2024 19:28	WG2391386
Magnesium,Dissolved	70.7		1.00	1	11/04/2024 18:56	WG2391367
Manganese,Dissolved	ND		0.0100	1	11/04/2024 18:56	WG2391367
Molybdenum,Dissolved	ND		0.00500	1	11/04/2024 18:56	WG2391367
Potassium,Dissolved	3.45		2.00	1	11/04/2024 18:56	WG2391367
Selenium,Dissolved	0.0223		0.0100	1	11/04/2024 18:56	WG2391367
Sodium	140		3.00	1	11/03/2024 19:28	WG2391386
Sodium,Dissolved	144		3.00	1	11/04/2024 18:56	WG2391367

AMW-2

Collected date/time: 10/22/24 09:45

SAMPLE RESULTS - 06

L1792306

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	15.2		1	11/04/2024 14:14	WG2391386

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	2000		12.5	1	11/04/2024 14:14	WG2391386

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	5950		100	1	10/24/2024 22:57	WG2389053

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	794		20.0	1	10/25/2024 11:16	WG2389329
Alkalinity,Bicarbonate	794		20.0	1	10/25/2024 11:16	WG2389329
Alkalinity,Carbonate	ND		20.0	1	10/25/2024 11:16	WG2389329
Alkalinity,Hydroxide	ND		20.0	1	10/25/2024 11:16	WG2389329

Sample Narrative:

L1792306-06 WG2389329: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	369		5.00	5	10/28/2024 17:03	WG2389043
Fluoride	ND		0.750	5	10/28/2024 17:03	WG2389043
Sulfate	3160		250	50	10/28/2024 17:21	WG2389043

Sample Narrative:

L1792306-06 WG2389043: Dilution due to matrix impact on instrumentation at lower dilution

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	11/04/2024 18:59	WG2391367
Arsenic,Dissolved	ND		0.0100	1	11/04/2024 18:59	WG2391367
Barium,Dissolved	0.0183		0.00500	1	11/04/2024 18:59	WG2391367
Boron,Dissolved	0.224		0.200	1	11/04/2024 18:59	WG2391367
Cadmium,Dissolved	ND		0.00200	1	11/04/2024 18:59	WG2391367
Calcium	502		5.00	5	11/04/2024 14:14	WG2391386
Calcium,Dissolved	478		1.00	1	11/04/2024 18:59	WG2391367
Iron,Dissolved	ND		0.100	1	11/04/2024 18:59	WG2391367
Lead,Dissolved	ND		0.00600	1	11/04/2024 18:59	WG2391367
Magnesium	181		5.00	5	11/04/2024 14:14	WG2391386
Magnesium,Dissolved	176		1.00	1	11/04/2024 18:59	WG2391367
Manganese,Dissolved	3.71		0.0100	1	11/04/2024 18:59	WG2391367
Molybdenum,Dissolved	ND		0.00500	1	11/04/2024 18:59	WG2391367
Potassium,Dissolved	30.7		2.00	1	11/04/2024 18:59	WG2391367
Selenium,Dissolved	0.0125		0.0100	1	11/04/2024 18:59	WG2391367
Sodium	1560		15.0	5	11/04/2024 14:14	WG2391386
Sodium,Dissolved	1610		15.0	5	11/04/2024 19:43	WG2391367

SMW-2

Collected date/time: 10/22/24 12:15

SAMPLE RESULTS - 07

L1792306

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	16.6		1	11/04/2024 14:16	WG2391386

Calculated Results

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	1930		12.5	1	11/04/2024 14:16	WG2391386

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	6810		100	1	10/24/2024 22:57	WG2389053

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	1020		20.0	1	10/25/2024 12:06	WG2389313
Alkalinity,Bicarbonate	1020		20.0	1	10/25/2024 12:06	WG2389313
Alkalinity,Carbonate	ND		20.0	1	10/25/2024 12:06	WG2389313
Alkalinity,Hydroxide	ND		20.0	1	10/25/2024 12:06	WG2389313

Sample Narrative:

L1792306-07 WG2389313: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	750		10.0	10	10/28/2024 17:57	WG2389043
Fluoride	0.186		0.150	1	10/28/2024 17:39	WG2389043
Sulfate	3320		100	20	10/30/2024 18:10	WG2391571

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	11/04/2024 19:08	WG2391367
Arsenic,Dissolved	ND		0.0100	1	11/04/2024 19:08	WG2391367
Barium,Dissolved	0.0108		0.00500	1	11/04/2024 19:08	WG2391367
Boron,Dissolved	0.329		0.200	1	11/04/2024 19:08	WG2391367
Cadmium,Dissolved	ND		0.00200	1	11/04/2024 19:08	WG2391367
Calcium	492		5.00	5	11/04/2024 14:16	WG2391386
Calcium,Dissolved	478		1.00	1	11/04/2024 19:08	WG2391367
Iron,Dissolved	ND		0.100	1	11/04/2024 19:08	WG2391367
Lead,Dissolved	ND		0.00600	1	11/04/2024 19:08	WG2391367
Magnesium	169		5.00	5	11/04/2024 14:16	WG2391386
Magnesium,Dissolved	168		1.00	1	11/04/2024 19:08	WG2391367
Manganese,Dissolved	0.501		0.0100	1	11/04/2024 19:08	WG2391367
Molybdenum,Dissolved	ND		0.00500	1	11/04/2024 19:08	WG2391367
Potassium,Dissolved	17.7		2.00	1	11/04/2024 19:08	WG2391367
Selenium,Dissolved	0.0127		0.0100	1	11/04/2024 19:08	WG2391367
Sodium	1670		15.0	5	11/04/2024 14:16	WG2391386
Sodium,Dissolved	1520		15.0	5	11/04/2024 19:46	WG2391367

DUP

Collected date/time: 10/21/24 14:45

SAMPLE RESULTS - 08

L1792306

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.96		1	11/03/2024 19:37	WG2391386

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	929		2.50	1	11/03/2024 19:37	WG2391386

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1630		25.0	1	10/24/2024 22:57	WG2389053

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	186		20.0	1	10/25/2024 17:35	WG2389327
Alkalinity,Bicarbonate	186		20.0	1	10/25/2024 17:35	WG2389327
Alkalinity,Carbonate	ND		20.0	1	10/25/2024 17:35	WG2389327
Alkalinity,Hydroxide	ND		20.0	1	10/25/2024 17:35	WG2389327

Sample Narrative:

L1792306-08 WG2389327: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	26.3		1.00	1	10/28/2024 18:15	WG2389043
Fluoride	0.785		0.150	1	10/28/2024 18:15	WG2389043
Sulfate	867		50.0	10	10/28/2024 18:33	WG2389043

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	11/04/2024 19:11	WG2391367
Arsenic,Dissolved	ND		0.0100	1	11/04/2024 19:11	WG2391367
Barium,Dissolved	0.0249		0.00500	1	11/04/2024 19:11	WG2391367
Boron,Dissolved	ND		0.200	1	11/04/2024 19:11	WG2391367
Cadmium,Dissolved	ND		0.00200	1	11/04/2024 19:11	WG2391367
Calcium	259		1.00	1	11/03/2024 19:37	WG2391386
Calcium,Dissolved	261		1.00	1	11/04/2024 19:11	WG2391367
Iron,Dissolved	ND		0.100	1	11/04/2024 19:11	WG2391367
Lead,Dissolved	ND		0.00600	1	11/04/2024 19:11	WG2391367
Magnesium	68.4		1.00	1	11/03/2024 19:37	WG2391386
Magnesium,Dissolved	69.6		1.00	1	11/04/2024 19:11	WG2391367
Manganese,Dissolved	ND		0.0100	1	11/04/2024 19:11	WG2391367
Molybdenum,Dissolved	ND		0.00500	1	11/04/2024 19:11	WG2391367
Potassium,Dissolved	3.52		2.00	1	11/04/2024 19:11	WG2391367
Selenium,Dissolved	0.0283		0.0100	1	11/04/2024 19:11	WG2391367
Sodium	137		3.00	1	11/03/2024 19:37	WG2391386
Sodium,Dissolved	144		3.00	1	11/04/2024 19:11	WG2391367

FPW

Collected date/time: 10/22/24 15:00

SAMPLE RESULTS - 09

L1792306

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.46		1	11/03/2024 19:39	WG2391386

Calculated Results

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	696		2.50	1	11/03/2024 19:39	WG2391386

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1170		20.0	1	10/24/2024 22:57	WG2389053

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Alkalinity	285		20.0	1	10/25/2024 11:20	WG2389329
Alkalinity,Bicarbonate	285		20.0	1	10/25/2024 11:20	WG2389329
Alkalinity,Carbonate	ND		20.0	1	10/25/2024 11:20	WG2389329
Alkalinity,Hydroxide	ND		20.0	1	10/25/2024 11:20	WG2389329

Sample Narrative:

L1792306-09 WG2389329: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	93.6		1.00	1	10/28/2024 18:51	WG2389043
Sulfate	258		50.0	10	10/28/2024 19:09	WG2389043

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	11/04/2024 19:14	WG2391367
Barium,Dissolved	0.0957		0.00500	1	11/04/2024 19:14	WG2391367
Cadmium,Dissolved	ND		0.00200	1	11/04/2024 19:14	WG2391367
Calcium	192		1.00	1	11/03/2024 19:39	WG2391386
Calcium,Dissolved	197		1.00	1	11/04/2024 19:14	WG2391367
Iron,Dissolved	ND		0.100	1	11/04/2024 19:14	WG2391367
Lead,Dissolved	ND		0.00600	1	11/04/2024 19:14	WG2391367
Magnesium	52.5		1.00	1	11/03/2024 19:39	WG2391386
Magnesium,Dissolved	54.5		1.00	1	11/04/2024 19:14	WG2391367
Manganese,Dissolved	ND		0.0100	1	11/04/2024 19:14	WG2391367
Molybdenum,Dissolved	ND		0.00500	1	11/04/2024 19:14	WG2391367
Selenium,Dissolved	0.0125		0.0100	1	11/04/2024 19:14	WG2391367
Sodium	88.4		3.00	1	11/03/2024 19:39	WG2391386
Sodium,Dissolved	92.0		3.00	1	11/04/2024 19:14	WG2391367

DH-96

Collected date/time: 10/22/24 13:45

SAMPLE RESULTS - 10

L1792306

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.37		1	11/03/2024 19:40	WG2391386

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	468		2.50	1	11/03/2024 19:40	WG2391386

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1320		20.0	1	10/24/2024 22:57	WG2389053

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	305		20.0	1	10/25/2024 11:25	WG2389329
Alkalinity,Bicarbonate	305		20.0	1	10/25/2024 11:25	WG2389329
Alkalinity,Carbonate	ND		20.0	1	10/25/2024 11:25	WG2389329
Alkalinity,Hydroxide	ND		20.0	1	10/25/2024 11:25	WG2389329

Sample Narrative:

L1792306-10 WG2389329: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	32.2		1.00	1	10/28/2024 19:27	WG2389043
Sulfate	728		50.0	10	10/28/2024 19:44	WG2389043

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	11/04/2024 19:17	WG2391367
Barium,Dissolved	0.00953		0.00500	1	11/04/2024 19:17	WG2391367
Cadmium,Dissolved	ND		0.00200	1	11/04/2024 19:17	WG2391367
Calcium	109		1.00	1	11/03/2024 19:40	WG2391386
Calcium,Dissolved	112		1.00	1	11/04/2024 19:17	WG2391367
Iron,Dissolved	ND		0.100	1	11/04/2024 19:17	WG2391367
Lead,Dissolved	ND		0.00600	1	11/04/2024 19:17	WG2391367
Magnesium	47.4		1.00	1	11/03/2024 19:40	WG2391386
Magnesium,Dissolved	48.9		1.00	1	11/04/2024 19:17	WG2391367
Manganese,Dissolved	0.565		0.0100	1	11/04/2024 19:17	WG2391367
Molybdenum,Dissolved	0.00740		0.00500	1	11/04/2024 19:17	WG2391367
Selenium,Dissolved	ND		0.0100	1	11/04/2024 19:17	WG2391367
Sodium	267		3.00	1	11/03/2024 19:40	WG2391386
Sodium,Dissolved	276		3.00	1	11/04/2024 19:17	WG2391367

DH-122

Collected date/time: 10/22/24 16:45

SAMPLE RESULTS - 11

L1792306

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.02		1	11/03/2024 19:42	WG2391386

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	706		2.50	1	11/03/2024 19:42	WG2391386

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1640		50.0	1	10/24/2024 22:57	WG2389053

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	316		20.0	1	10/25/2024 11:31	WG2389329
Alkalinity,Bicarbonate	316		20.0	1	10/25/2024 11:31	WG2389329
Alkalinity,Carbonate	ND		20.0	1	10/25/2024 11:31	WG2389329
Alkalinity,Hydroxide	ND		20.0	1	10/25/2024 11:31	WG2389329

Sample Narrative:

L1792306-11 WG2389329: Endpoint pH 4.5 headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	126		1.00	1	10/28/2024 20:38	WG2389043
Sulfate	940		50.0	10	10/28/2024 20:56	WG2389043

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	11/04/2024 19:20	WG2391367
Barium,Dissolved	0.0205		0.00500	1	11/04/2024 19:20	WG2391367
Cadmium,Dissolved	ND		0.00200	1	11/04/2024 19:20	WG2391367
Calcium	188		1.00	1	11/03/2024 19:42	WG2391386
Calcium,Dissolved	195		1.00	1	11/04/2024 19:20	WG2391367
Iron,Dissolved	ND		0.100	1	11/04/2024 19:20	WG2391367
Lead,Dissolved	ND		0.00600	1	11/04/2024 19:20	WG2391367
Magnesium	57.5		1.00	1	11/03/2024 19:42	WG2391386
Magnesium,Dissolved	60.4		1.00	1	11/04/2024 19:20	WG2391367
Manganese,Dissolved	0.476		0.0100	1	11/04/2024 19:20	WG2391367
Molybdenum,Dissolved	0.00822		0.00500	1	11/04/2024 19:20	WG2391367
Selenium,Dissolved	ND		0.0100	1	11/04/2024 19:20	WG2391367
Sodium	306		3.00	1	11/03/2024 19:42	WG2391386
Sodium,Dissolved	322		3.00	1	11/04/2024 19:20	WG2391367

WG2389053

Gravimetric Analysis by Method 2540 C-2011

QUALITY CONTROL SUMMARY

L1792306-02,03,04,05,06,07,08,09,10,11

Method Blank (MB)

(MB) R4138218-1 10/24/24 22:57					
	MB Result	MB Qualifier	MB MDL	MB RDL	
Analyte	mg/l		mg/l	mg/l	
Dissolved Solids	U		10.0	10.0	

L1792306-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1792306-11 10/24/24 22:57 • (DUP) R4138218-4 10/24/24 22:57					
	Original Result	DUP Result	Dilution	DUP RPD	DUP RPD Limits
Analyte	mg/l	mg/l		%	%
Dissolved Solids	1640	1730	1	5.65	10

Laboratory Control Sample (LCS)

(LCS) R4138218-2 10/24/24 22:57					
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8110	92.2	85.0-115	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

WG2390937

Gravimetric Analysis by Method 2540 C-2011

QUALITY CONTROL SUMMARY

L1792306-01

Method Blank (MB)

(MB) R4139908-1 10/28/24 16:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1792170-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1792170-08 10/28/24 16:30 • (DUP) R4139908-3 10/28/24 16:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	10700	10800	1	0.745		10

L1793271-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1793271-01 10/28/24 16:30 • (DUP) R4139908-4 10/28/24 16:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1940	2080	1	6.72		10

Laboratory Control Sample (LCS)

(LCS) R4139908-2 10/28/24 16:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8750	99.4	85.0-115	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4137843-2 10/25/24 09:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U	8.45	8.45	20.0
Alkalinity,Bicarbonate	U	8.45	8.45	20.0
Alkalinity,Carbonate	U	8.45	8.45	20.0
Alkalinity,Hydroxide	U	8.45	8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1792174-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1792174-01 10/25/24 10:07 • (DUP) R4137843-4 10/25/24 10:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	294	304	1	3.15		20
Alkalinity,Bicarbonate	294	304	1	3.15		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace
DUP: Endpoint pH 4.5

L1792306-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1792306-07 10/25/24 12:06 • (DUP) R4137843-6 10/25/24 12:11

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	1020	1020	1	0.684		20
Alkalinity,Bicarbonate	1020	1020	1	0.684		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace
DUP: Endpoint pH 4.5

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

WG2389313

Wet Chemistry by Method 2320 B-2011

Laboratory Control Sample (LCS)

QUALITY CONTROL SUMMARY

L1792306-05.07

(LCS) R4137843-1 10/25/24 09:46

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	101	101	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

WG2389327

Wet Chemistry by Method 2320 B-2011

QUALITY CONTROL SUMMARY

L1792306-03.08

Method Blank (MB)

(MB) R4137868-2 10/25/24 15:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U	8.45	8.45	20.0
Alkalinity,Bicarbonate	U	8.45	8.45	20.0
Alkalinity,Carbonate	U	8.45	8.45	20.0
Alkalinity,Hydroxide	U	8.45	8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1792230-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1792230-07 10/25/24 16:04 • (DUP) R4137868-4 10/25/24 16:07

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	ND	ND	1	7.64		20
Alkalinity,Bicarbonate	ND	ND	1	7.64		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace
DUP: Endpoint pH 4.5

L1792306-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1792306-08 10/25/24 17:35 • (DUP) R4137868-6 10/25/24 17:40

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	186	195	1	4.47		20
Alkalinity,Bicarbonate	186	195	1	4.47		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace
DUP: Endpoint pH 4.5

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WG2389327

Wet Chemistry by Method 2320 B-2011

QUALITY CONTROL SUMMARY

L1792306-03.08

Laboratory Control Sample (LCS)

(LCS) R4137868-1 10/25/24 15:45

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	99.9	99.9	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4137670-2 10/25/24 09:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U	8.45	8.45	20.0
Alkalinity,Bicarbonate	U	8.45	8.45	20.0
Alkalinity,Carbonate	U	8.45	8.45	20.0
Alkalinity,Hydroxide	U	8.45	8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1792165-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1792165-01 10/25/24 10:14 • (DUP) R4137670-3 10/25/24 10:20

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	481	487	1	1.24		20
Alkalinity,Bicarbonate	372	377	1	1.48		20
Alkalinity,Carbonate	109	109	1	0.406		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace
DUP: Endpoint pH 4.5

L1792396-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1792396-01 10/25/24 12:12 • (DUP) R4137670-4 10/25/24 12:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	73.6	73.9	1	0.417		20
Alkalinity,Bicarbonate	73.6	73.9	1	0.417		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace
DUP: Endpoint pH 4.5

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

WG2389329

Wet Chemistry by Method 2320 B-2011

Laboratory Control Sample (LCS)

QUALITY CONTROL SUMMARY

L1792306-01,02,04,06,09,10,11

(LCS) R4137670-1 10/25/24 09:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	103	103	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

WG2389043

Wet Chemistry by Method 9056A

QUALITY CONTROL SUMMARY

L1792306-01,02,03,04,05,06,07,08,09,10,11

Method Blank (MB)

(MB) R4138985-1 10/28/24 10:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U	0.547	1.00	
Fluoride	U	0.0761	0.150	
Sulfate	U	0.637	5.00	

L1792306-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1792306-01 10/28/24 11:23 • (DUP) R4138985-3 10/28/24 11:41

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	17.8	18.3	1	3.07		15
Fluoride	1.37	1.44	1	4.92		15

L1792306-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1792306-03 10/28/24 13:46 • (DUP) R4138985-7 10/28/24 14:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	140	141	1	0.208		15
Fluoride	ND	ND	1	0.000		15

L1792306-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1792306-03 10/28/24 14:04 • (DUP) R4138985-9 10/28/24 14:58

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	1970	1940	10	1.39		15

Laboratory Control Sample (LCS)

(LCS) R4138985-2 10/28/24 11:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	37.5	93.6	80.0-120	
Fluoride	8.00	7.23	90.4	80.0-120	
Sulfate	40.0	39.3	98.2	80.0-120	

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WG2389043

Wet Chemistry by Method 9056A

QUALITY CONTROL SUMMARY

L1792306-01.02.03.04.05.06.07.08.09.10.11

L1792306-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1792306-01 10/28/24 11:23 • (MS) R4138985-4 10/28/24 11:59 • (MSD) R4138985-5 10/28/24 12:17

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	17.8	54.7	54.5	92.4	1	80.0-120			0.475	15
Fluoride	8.00	1.37	8.42	8.41	88.1	1	80.0-120			0.196	15
Sulfate	40.0	2030	1680	1690	0.000	1	80.0-120	<u>EV</u>	<u>EV</u>	0.243	15

L1792306-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1792306-03 10/28/24 13:46 • (MS) R4138985-8 10/28/24 14:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40.0	140	151	27.5	1	80.0-120	<u>J6</u>
Fluoride	8.00	ND	6.79	84.9	1	80.0-120	
Sulfate	40.0	1910	1530	0.000	1	80.0-120	<u>EV</u>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

WG2391571

Wet Chemistry by Method 9056A

QUALITY CONTROL SUMMARY

L17923306-01.07

Method Blank (MB)

(MB) R4139981-1 10/30/24 17:18

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sulfate	U	0.637	5.00	

L1793553-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1793553-01 10/31/24 01:08 • (DUP) R4139981-3 10/31/24 01:25

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	ND	ND	1	200	P1	15

L1793553-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1793553-02 10/31/24 02:18 • (DUP) R4139981-6 10/31/24 02:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	32.2	31.6	1	1.70		15

Laboratory Control Sample (LCS)

(LCS) R4139981-2 10/30/24 17:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40.0	41.3	103	80.0-120	

L1793553-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1793553-01 10/31/24 01:08 • (MS) R4139981-4 10/31/24 01:43 • (MSD) R4139981-5 10/31/24 02:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	40.0	ND	41.2	40.9	101	100	1	80.0-120		0.563	15	

L1793553-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1793553-02 10/31/24 02:18 • (MS) R4139981-7 10/31/24 02:52

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	40.0	32.2	71.6	98.7	1	80.0-120	

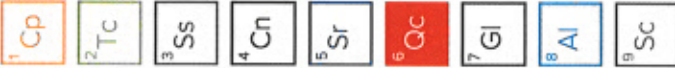
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WG2391367

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1792306-01.02.03.04.05.06.07.08.09.10.11

Method Blank (MB)

(MB) R4141881-1 11/04/24 17:57

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony, Dissolved	U	0.00430	0.00430	0.0100
Arsenic, Dissolved	U	0.00440	0.00440	0.0100
Barium, Dissolved	U	0.000736	0.000736	0.00500
Boron, Dissolved	U	0.0200	0.0200	0.200
Cadmium, Dissolved	U	0.000479	0.000479	0.00200
Calcium, Dissolved	U	0.0793	0.0793	1.00
Iron, Dissolved	U	0.0180	0.0180	0.100
Lead, Dissolved	U	0.00299	0.00299	0.00600
Magnesium, Dissolved	U	0.0853	0.0853	1.00
Manganese, Dissolved	U	0.000934	0.000934	0.0100
Molybdenum, Dissolved	U	0.00116	0.00116	0.00500
Potassium, Dissolved	U	0.261	0.261	2.00
Selenium, Dissolved	U	0.00735	0.00735	0.0100
Sodium, Dissolved	U	0.504	0.504	3.00

Laboratory Control Sample (LCS)

(LCS) R4141881-2 11/04/24 18:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony, Dissolved	1.00	1.00	100	80.0-120	
Arsenic, Dissolved	1.00	0.979	97.9	80.0-120	
Barium, Dissolved	1.00	1.03	103	80.0-120	
Boron, Dissolved	1.00	0.961	96.1	80.0-120	
Cadmium, Dissolved	1.00	0.952	95.2	80.0-120	
Calcium, Dissolved	10.0	9.84	98.4	80.0-120	
Iron, Dissolved	10.0	9.56	95.6	80.0-120	
Lead, Dissolved	1.00	0.974	97.4	80.0-120	
Magnesium, Dissolved	10.0	9.46	94.6	80.0-120	
Manganese, Dissolved	1.00	1.04	104	80.0-120	
Molybdenum, Dissolved	1.00	1.07	107	80.0-120	
Potassium, Dissolved	10.0	9.84	98.4	80.0-120	
Selenium, Dissolved	1.00	0.978	97.8	80.0-120	
Sodium, Dissolved	10.0	10.1	101	80.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

WG2391367

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L17923306-01,02,03,04,05,06,07,08,09,10,11

L1792315-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1792315-30 11/04/24 18:02 • (MS) R4141881-4 11/04/24 18:08 • (MSD) R4141881-5 11/04/24 18:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony, Dissolved	1.00	ND	0.999	0.988	99.9	98.8	1	75.0-125			1.08	20
Arsenic, Dissolved	1.00	ND	0.982	0.972	98.2	97.2	1	75.0-125			0.963	20
Barium, Dissolved	1.00	0.0178	1.04	1.03	102	101	1	75.0-125			0.959	20
Boron, Dissolved	1.00	ND	0.976	0.968	97.6	96.8	1	75.0-125			0.807	20
Cadmium, Dissolved	1.00	ND	0.955	0.948	95.4	94.7	1	75.0-125			0.679	20
Calcium, Dissolved	10.0	18.2	28.5	28.2	102	100	1	75.0-125			0.730	20
Iron, Dissolved	10.0	ND	9.59	9.49	95.5	94.5	1	75.0-125			1.00	20
Lead, Dissolved	1.00	ND	0.971	0.963	97.1	96.3	1	75.0-125			0.790	20
Magnesium, Dissolved	10.0	5.59	14.8	14.7	92.1	91.5	1	75.0-125			0.468	20
Manganese, Dissolved	1.00	0.936	1.92	1.91	98.7	97.7	1	75.0-125			0.567	20
Molybdenum, Dissolved	1.00	ND	1.06	1.06	106	105	1	75.0-125			0.603	20
Potassium, Dissolved	10.0	ND	10.3	10.2	97.7	97.2	1	75.0-125			0.477	20
Selenium, Dissolved	1.00	ND	0.982	0.972	98.2	97.2	1	75.0-125			0.996	20
Sodium, Dissolved	10.0	15.7	24.7	24.6	90.7	89.1	1	75.0-125			0.654	20

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

WG2391385

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1792306-01.02

Method Blank (MB)

(MB) R4142433-1 11/05/24 18:51

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium	0.240	J	0.0793	1.00
Magnesium	U		0.0853	1.00
Sodium	0.591	J	0.504	3.00

Laboratory Control Sample (LCS)

(LCS) R4142433-2 11/05/24 18:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	10.0	9.75	97.5	80.0-120	
Magnesium	10.0	9.48	94.8	80.0-120	
Sodium	10.0	9.89	98.9	80.0-120	

L1792289-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1792289-12 11/05/24 18:55 • (MS) R4142433-4 11/05/24 18:58 • (MSD) R4142433-5 11/05/24 19:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Calcium	10.0	168	174	175	65.3	71.5	1	75.0-125	V	V	0.358	20
Magnesium	10.0	3.05	12.2	12.3	91.4	92.3	1	75.0-125			0.745	20
Sodium	10.0	77.3	84.6	85.5	72.8	81.9	1	75.0-125	V		1.08	20

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Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1792306-03,04,05,06,07,08,09,10,11

Method Blank (MB)

(MB) R4141542-1 11/03/24 18:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium	U		0.0793	1.00
Magnesium	U		0.0853	1.00
Sodium	U		0.504	3.00

Laboratory Control Sample (LCS)

(LCS) R4141542-2 11/03/24 18:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	10.0	9.54	95.4	80.0-120	
Magnesium	10.0	9.29	92.9	80.0-120	
Sodium	10.0	9.89	98.9	80.0-120	

L1792311-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1792311-01 11/03/24 19:00 • (MS) R4141542-4 11/03/24 19:03 • (MSD) R4141542-5 11/03/24 19:05

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Calcium	10.0	165	173	171	73.7	1	75.0-125	✓	✓	0.890	20
Magnesium	10.0	123	130	130	68.8	1	75.0-125	✓	✓	0.252	20
Sodium	10.0	434	432	435	0.000	1	75.0-125	✓	✓	0.715	20

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GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ¹ &	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Company Name/Address: American Environmental - CO 8191 Southpark Lane Suite 107 Littleton, CO 80120 Report to: Ryan Smith Phone: 303-948-7733		Billing Information: Accounts Payable 8191 Southpark Lane Suite 107 Littleton, CO 80120 Email To: rsmith@aecdenv.com; cshrendsen@aecdenv.com		Chain of Custody Page <u> 1 </u> of <u> 1 </u>	
Project Description: Keenesburg Mine Project Description: Keenesburg Mine		City/State Collected: <u>Keenesburg CO</u> Client Project # <u>AMEENVLCO-KEENESBURG</u>		Analysis / Container / Preservative Pres Chk <u> ✓ </u>	
Collected by (print): DAVID SANDENO Collected by (signature): <i>[Signature]</i> Immediately Packed on Ice <u> N </u> <u> ✓ </u>		Site/Facility ID # Keenesburg mine Rush? (Lab MUST Be Notified) Same Day <u> </u> Five Day <u> </u> Next Day <u> </u> 5 Day (Rad Only) <u> </u> Two Day <u> </u> 10 Day (Rad Only) <u> </u> Three Day <u> </u>		SDG # UPR2306 A158	
Sample ID PC-1 PC-2 PC-5 PC-6 AMW-1 AMW-2 SMW-2 DUP FPW		Comp/Grab 6 6 6 6 6 6 6 6 6		Matrix * GW GW GW GW GW GW GW GW GW	
Date Results Needed 10/22/24 10/22/24 10/21/24 10/21/24 10/21/24 10/22/24 10/22/24 10/21/24 10/22/24 10/22/24		Date 9:00 10:15 15:45 15:00 14:30 9:45 12:15 14:45 15:00 15:00		Remarks -01 -02 -03 -04 -05 -06 -07 -08 -09	
ALKB1, ALKCA 250mHDP-NOPres CI,FS04 125mHDP-NOPres Diss Metals 250mHDP-NOPres HARD 250mHDP-HNO3 SAR 250mHDP-HNO3 TDS 1L-HDP-NOPres V8260 40mIamb-HCl-Bik		Temp pH <u> </u> Flow <u> </u> Other <u> </u>		Sample Receipt Checklist COC Seal Present/Intact: <u> N </u> COC Signed/Accurate: <u> N </u> Bottles arrive intact: <u> N </u> Correct bottles used: <u> N </u> Sufficient volume sent: <u> N </u> If Applicable VOA Zero Headspace: <u> N </u> Preservation Correct/Checked: <u> N </u> RAD Screen <0.5 mR/hr: <u> N </u>	
Remarks: Diss Metals=As, Ba, B, Ca, Cd, Fe, Kd, Mg, Mn, Na, Pb, Sb, Se PC-1, PC-2, PC-6, AMW-1, AMW-2, SMW-2: Fluoride, SBDICP, BDICP, KDICP AMW-1, AMW-2, SMW-2, FPW, DH-96, DH-122: ALKOH, ALK		Tracking # Received by: (Signature) <u> </u> Time: <u> 9:15 </u> Received by: (Signature) <u> </u> Time: <u> </u> Received for lab by: (Signature) <u> </u> Time: <u> </u>		Temp °C <u> 66 </u> Date: 10/22/24 Time: 0900	
Relinquished by: (Signature) <i>[Signature]</i>		Relinquished by: (Signature) <i>[Signature]</i>		Relinquished by: (Signature) <i>[Signature]</i>	

Company Name/Address: American Environmental - CO 8191 Southpark Lane Suite 107 Littleton, CO 80120		Billing Information: Accounts Payable 8191 Southpark Lane Suite 107 Littleton, CO 80120		Chain of Custody Page <u>1</u> of <u>1</u> Pace PEOPLE ADVANCING SCIENCE MT JULIET, TN 12065 Johnson Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/health/pace-standard-terms.pdf	
Report to: Ryan Smith Project Description: Keenesburg Mine		City/State Collected: Keenesburg CO		Email To: rsmith@aecdenver.com; cahrenden@aecdenver.com	
Client Project # 303-948-7733		Lab Project # AMEENVLCO-KEENESBURG		Table # 1172306	
Collected by (print): DAVID SAN DIEGO		Site/Facility ID # KEENESBURG MINE		Accnum: AMEENVLCO Template: T160430	
Collected by (signature): <i>[Signature]</i>		Quote # Rush? (Lab MUST Be Notified) Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day ☐		Prelogin: P1096928 PM: 824 - Chris Ward	
Immediately Packed on Ice N ☐ Y ☒		Date Results Needed No. of Cntrs		PB:	
Sample ID		Comp/Grab		Shipped Via: FedEx Ground	
Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - Waste Water DW - Drinking Water OT - Other _____		Matrix *		Remarks:	
Relinquished by : (Signature) <i>[Signature]</i>		Date: 10/23/24		Temp _____	
Relinquished by : (Signature)		Date:		Flow _____	
Relinquished by : (Signature)		Date:		Other _____	

Remarks: Diss Metals=As,Ba,Ca,Cd,Fe,Kd,Mg,Mn,Na,Pb,Sb,Se PC-1,PC-2PC-6,AMW-1,AMW-2,SMW-2: Fluoride, SBDICP, BDICP, KDICP AMW-1,AMW-2,SMW-2,FPW,DH-96,DH-122: ALKOH, ALK		Sample Receipt Checklist: COC Seal Present/Intact: ☒ N ☐ Y COC Signed/Accurate: ☒ N ☐ Y Bottles arrive intact: ☒ N ☐ Y Correct bottles used: ☒ N ☐ Y Sufficient volume sent: ☒ N ☐ Y I/A Applicable YOA Zero Headspace: ☒ N ☐ Y Preservation Correct/Checked: ☒ N ☐ Y RAD Screen <0.5 mS/hr: ☒ N ☐ Y	
Samples returned via: UPS ☒ FedEx _____ Courier _____		Tracking #	
Received by: (Signature) <i>[Signature]</i>		Date: 10/23/24	
Received by: (Signature)		Date:	
Received for lab by: (Signature) <i>[Signature]</i>		Date: 10-24-24	
Temp: _____ °C		Bottles Received: 3	
Flow: _____		Other: _____	
Condition: NCF / OK		Hold:	

Temperature

[illegible]

Demang
Name

10.29.24
Date