ANALYTICAL REPORT

July 19, 2024

Revised Report

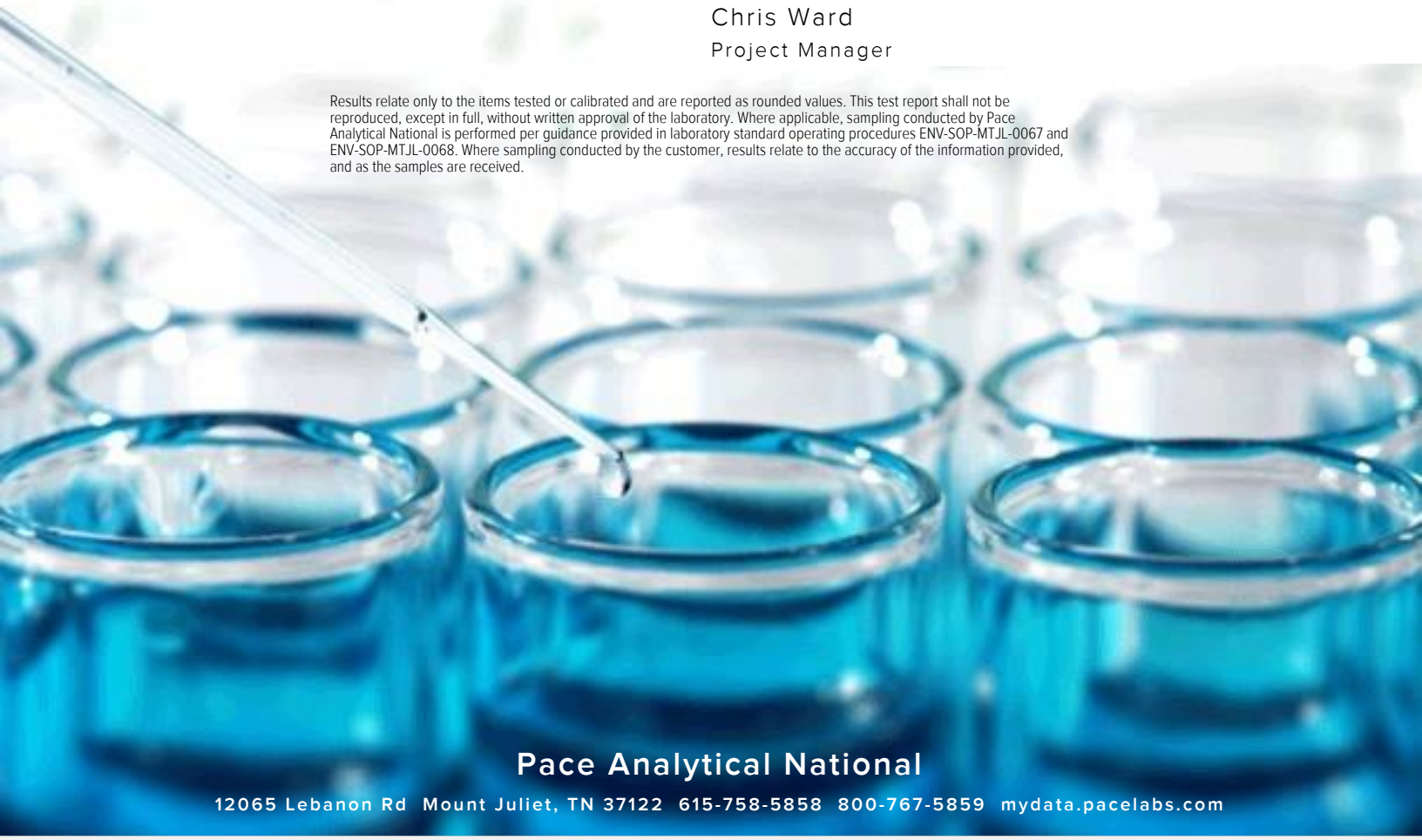
Pace Analytical Services, LLC
2025.06.24 21:32:35 -05'00'
Document is certified

Civitas - CO

Sample Delivery Group:	L1750362
Samples Received:	06/25/2024
Project Number:	24256
Description:	State Bierstadt 4-65 35-34 2AH
Report To:	Sam Vogt / Jacob Evans
	6855 W. 118th Ave
	Broomfield, CO 80020

Entire Report Reviewed By:

Chris Ward
Project Manager



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

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BG11@3' L1750362-01 Solid

Collected by: Daniel Hensel | Collected date/time: 06/21/24 10:00 | Received date/time: 06/25/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2314095	1	07/01/24 12:47	07/01/24 12:47	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2312578	1	07/01/24 04:55	07/01/24 14:22	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2314937	1	06/30/24 12:21	07/02/24 08:30	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2314933	1	06/30/24 12:17	06/30/24 15:46	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2315727	1	07/02/24 11:32	07/02/24 22:17	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2313491	5	06/30/24 23:17	07/01/24 18:00	LD	Mt. Juliet, TN

BG11@4' L1750362-02 Solid

Collected by: Daniel Hensel | Collected date/time: 06/21/24 10:15 | Received date/time: 06/25/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2314092	1	07/01/24 16:26	07/01/24 16:26	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2312578	1	07/01/24 04:55	07/01/24 14:49	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2314937	1	06/30/24 12:21	07/02/24 08:30	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2314933	1	06/30/24 12:17	06/30/24 15:46	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2314110	1	07/02/24 12:53	07/02/24 21:47	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2313491	5	06/30/24 23:17	07/01/24 18:03	LD	Mt. Juliet, TN

BG12@3' L1750362-03 Solid

Collected by: Daniel Hensel | Collected date/time: 06/21/24 10:30 | Received date/time: 06/25/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2314095	1	07/01/24 12:50	07/01/24 12:50	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2312578	1	07/01/24 04:55	07/01/24 14:58	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2314937	1	06/30/24 12:21	07/02/24 08:30	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2314933	1	06/30/24 12:17	06/30/24 15:46	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2315727	1	07/02/24 11:32	07/02/24 22:19	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2314499	5	06/29/24 09:04	06/29/24 15:20	SJM	Mt. Juliet, TN

BG12@4' L1750362-04 Solid

Collected by: Daniel Hensel | Collected date/time: 06/21/24 10:45 | Received date/time: 06/25/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2314092	1	07/01/24 16:29	07/01/24 16:29	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2312578	1	07/01/24 04:55	07/01/24 15:07	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2314937	1	06/30/24 12:21	07/02/24 08:30	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2314933	1	06/30/24 12:17	06/30/24 15:46	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2314110	1	07/02/24 12:53	07/02/24 21:49	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2314499	5	06/29/24 09:04	06/29/24 15:23	SJM	Mt. Juliet, TN

BG13@3' L1750362-05 Solid

Collected by: Daniel Hensel | Collected date/time: 06/21/24 11:00 | Received date/time: 06/25/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2314095	1	07/01/24 12:54	07/01/24 12:54	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2312578	1	07/01/24 04:55	07/01/24 15:24	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2314937	1	06/30/24 12:21	07/02/24 08:30	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2314933	1	06/30/24 12:17	06/30/24 15:46	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2315727	1	07/02/24 11:32	07/02/24 22:20	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2314499	5	06/29/24 09:04	06/29/24 15:27	SJM	Mt. Juliet, TN

BG13@4' L1750362-06 Solid

Collected by: Daniel Hensel | Collected date/time: 06/21/24 11:15 | Received date/time: 06/25/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2314095	1	07/01/24 12:57	07/01/24 12:57	DJS	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2312578	1	07/01/24 04:55	07/01/24 15:33	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2314937	1	06/30/24 12:21	07/02/24 08:30	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2314933	1	06/30/24 12:17	06/30/24 15:46	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2315727	1	07/02/24 11:32	07/02/24 22:22	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2314499	5	06/29/24 09:04	06/29/24 15:53	SJM	Mt. Juliet, TN

BG14@3' L1750362-07 Solid

Collected by: Daniel Hensel | Collected date/time: 06/21/24 11:30 | Received date/time: 06/25/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2314092	1	07/01/24 16:32	07/01/24 16:32	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2313076	1	07/02/24 01:47	07/03/24 00:07	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2314937	1	06/30/24 12:21	07/02/24 08:30	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2314933	1	06/30/24 12:17	06/30/24 15:46	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2314110	1	07/02/24 12:53	07/02/24 21:50	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2314499	5	06/29/24 09:04	06/29/24 15:56	SJM	Mt. Juliet, TN

BG14@4' L1750362-08 Solid

Collected by: Daniel Hensel | Collected date/time: 06/21/24 11:45 | Received date/time: 06/25/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2314092	1	07/01/24 16:36	07/01/24 16:36	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2313076	1	07/02/24 01:47	07/03/24 00:16	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2314937	1	06/30/24 12:21	07/02/24 08:30	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2314933	1	06/30/24 12:17	06/30/24 15:46	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2314110	1	07/02/24 12:53	07/02/24 21:52	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2314499	5	06/29/24 09:04	06/29/24 15:59	SJM	Mt. Juliet, TN

BG15@3' L1750362-09 Solid

Collected by: Daniel Hensel | Collected date/time: 06/21/24 12:00 | Received date/time: 06/25/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2314092	1	07/01/24 16:39	07/01/24 16:39	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2313076	1	07/02/24 01:47	07/03/24 00:25	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2314937	1	06/30/24 12:21	07/02/24 08:30	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2314933	1	06/30/24 12:17	06/30/24 15:46	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2314110	1	07/02/24 12:53	07/02/24 21:54	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2314499	5	06/29/24 09:04	06/29/24 16:03	SJM	Mt. Juliet, TN

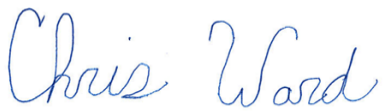
BG15@4' L1750362-10 Solid

Collected by: Daniel Hensel | Collected date/time: 06/21/24 12:15 | Received date/time: 06/25/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2314092	1	07/01/24 16:43	07/01/24 16:43	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2313076	1	07/02/24 01:47	07/03/24 00:43	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2314937	1	06/30/24 12:21	07/02/24 08:30	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2314933	1	06/30/24 12:17	06/30/24 15:46	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2314110	1	07/02/24 12:53	07/02/24 21:56	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2314499	5	06/29/24 09:04	06/29/24 16:06	SJM	Mt. Juliet, TN

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

Report Revision History

Level II Report - Version 1: 07/03/24 16:17
Level II Report - Version 2: 07/03/24 16:53
Level II Report - Version 3: 07/08/24 13:05

Project Narrative

Report reissued for split data - State Bierstadt 4-65 35-34 2AH

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.92		1	07/01/2024 12:47	WG2314095

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	07/01/2024 14:22	WG2312578

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.73	T8	1	07/02/2024 08:30	WG2314937

Sample Narrative:

L1750362-01 WG2314937: 7.73 at 20.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2350		10.0	1	06/30/2024 15:46	WG2314933

Sample Narrative:

L1750362-01 WG2314933: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.446		0.0167	0.200	1	07/02/2024 22:17	WG2315727

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.90		0.100	1.00	5	07/01/2024 18:00	WG2313491
Barium	150		0.152	2.50	5	07/01/2024 18:00	WG2313491
Cadmium	U		0.0855	1.00	5	07/01/2024 18:00	WG2313491
Copper	9.13		0.132	5.00	5	07/01/2024 18:00	WG2313491
Lead	8.07		0.0990	2.00	5	07/01/2024 18:00	WG2313491
Nickel	8.81		0.197	2.50	5	07/01/2024 18:00	WG2313491
Selenium	0.998	J	0.180	2.50	5	07/01/2024 18:00	WG2313491
Silver	U		0.0865	0.500	5	07/01/2024 18:00	WG2313491
Zinc	40.5		0.740	25.0	5	07/01/2024 18:00	WG2313491

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.07		1	07/01/2024 16:26	WG2314092

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	07/01/2024 14:49	WG2312578

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.68	T8	1	07/02/2024 08:30	WG2314937

Sample Narrative:

L1750362-02 WG2314937: 7.68 at 21.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2540		10.0	1	06/30/2024 15:46	WG2314933

Sample Narrative:

L1750362-02 WG2314933: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.519		0.0167	0.200	1	07/02/2024 21:47	WG2314110

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.44		0.100	1.00	5	07/01/2024 18:03	WG2313491
Barium	156		0.152	2.50	5	07/01/2024 18:03	WG2313491
Cadmium	U		0.0855	1.00	5	07/01/2024 18:03	WG2313491
Copper	8.19		0.132	5.00	5	07/01/2024 18:03	WG2313491
Lead	7.63		0.0990	2.00	5	07/01/2024 18:03	WG2313491
Nickel	8.26		0.197	2.50	5	07/01/2024 18:03	WG2313491
Selenium	0.628	J	0.180	2.50	5	07/01/2024 18:03	WG2313491
Silver	U		0.0865	0.500	5	07/01/2024 18:03	WG2313491
Zinc	35.7		0.740	25.0	5	07/01/2024 18:03	WG2313491

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.439		1	07/01/2024 12:50	WG2314095

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.299	J	0.255	1.00	1	07/01/2024 14:58	WG2312578

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.65	T8	1	07/02/2024 08:30	WG2314937

Sample Narrative:

L1750362-03 WG2314937: 7.65 at 21C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	509		10.0	1	06/30/2024 15:46	WG2314933

Sample Narrative:

L1750362-03 WG2314933: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.223		0.0167	0.200	1	07/02/2024 22:19	WG2315727

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.54		0.100	1.00	5	06/29/2024 15:20	WG2314499
Barium	81.7		0.152	2.50	5	06/29/2024 15:20	WG2314499
Cadmium	0.159	J	0.0855	1.00	5	06/29/2024 15:20	WG2314499
Copper	7.83		0.132	5.00	5	06/29/2024 15:20	WG2314499
Lead	8.47		0.0990	2.00	5	06/29/2024 15:20	WG2314499
Nickel	6.93		0.197	2.50	5	06/29/2024 15:20	WG2314499
Selenium	0.295	J	0.180	2.50	5	06/29/2024 15:20	WG2314499
Silver	U		0.0865	0.500	5	06/29/2024 15:20	WG2314499
Zinc	21.6	J	0.740	25.0	5	06/29/2024 15:20	WG2314499

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.617		1	07/01/2024 16:29	WG2314092

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.307	J	0.255	1.00	1	07/01/2024 15:07	WG2312578

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.64	T8	1	07/02/2024 08:30	WG2314937

Sample Narrative:

L1750362-04 WG2314937: 7.64 at 21C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	533		10.0	1	06/30/2024 15:46	WG2314933

Sample Narrative:

L1750362-04 WG2314933: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.272		0.0167	0.200	1	07/02/2024 21:49	WG2314110

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.02		0.100	1.00	5	06/29/2024 15:23	WG2314499
Barium	108		0.152	2.50	5	06/29/2024 15:23	WG2314499
Cadmium	0.194	J	0.0855	1.00	5	06/29/2024 15:23	WG2314499
Copper	9.37		0.132	5.00	5	06/29/2024 15:23	WG2314499
Lead	11.8		0.0990	2.00	5	06/29/2024 15:23	WG2314499
Nickel	8.36		0.197	2.50	5	06/29/2024 15:23	WG2314499
Selenium	0.351	J	0.180	2.50	5	06/29/2024 15:23	WG2314499
Silver	U		0.0865	0.500	5	06/29/2024 15:23	WG2314499
Zinc	28.2		0.740	25.0	5	06/29/2024 15:23	WG2314499

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.143		1	07/01/2024 12:54	WG2314095

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.313	J	0.255	1.00	1	07/01/2024 15:24	WG2312578

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.67	T8	1	07/02/2024 08:30	WG2314937

Sample Narrative:

L1750362-05 WG2314937: 6.67 at 21.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	678		10.0	1	06/30/2024 15:46	WG2314933

Sample Narrative:

L1750362-05 WG2314933: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.289		0.0167	0.200	1	07/02/2024 22:20	WG2315727

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.00		0.100	1.00	5	06/29/2024 15:27	WG2314499
Barium	88.2		0.152	2.50	5	06/29/2024 15:27	WG2314499
Cadmium	0.189	J	0.0855	1.00	5	06/29/2024 15:27	WG2314499
Copper	7.83		0.132	5.00	5	06/29/2024 15:27	WG2314499
Lead	10.5		0.0990	2.00	5	06/29/2024 15:27	WG2314499
Nickel	7.60		0.197	2.50	5	06/29/2024 15:27	WG2314499
Selenium	0.309	J	0.180	2.50	5	06/29/2024 15:27	WG2314499
Silver	U		0.0865	0.500	5	06/29/2024 15:27	WG2314499
Zinc	24.6	J	0.740	25.0	5	06/29/2024 15:27	WG2314499

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.161		1	07/01/2024 12:57	WG2314095

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.364	J	0.255	1.00	1	07/01/2024 15:33	WG2312578

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.86	T8	1	07/02/2024 08:30	WG2314937

Sample Narrative:

L1750362-06 WG2314937: 6.86 at 21.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	590		10.0	1	06/30/2024 15:46	WG2314933

Sample Narrative:

L1750362-06 WG2314933: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.270		0.0167	0.200	1	07/02/2024 22:22	WG2315727

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.68		0.100	1.00	5	06/29/2024 15:53	WG2314499
Barium	127		0.152	2.50	5	06/29/2024 15:53	WG2314499
Cadmium	0.148	J	0.0855	1.00	5	06/29/2024 15:53	WG2314499
Copper	10.7		0.132	5.00	5	06/29/2024 15:53	WG2314499
Lead	11.1		0.0990	2.00	5	06/29/2024 15:53	WG2314499
Nickel	11.6		0.197	2.50	5	06/29/2024 15:53	WG2314499
Selenium	0.369	J	0.180	2.50	5	06/29/2024 15:53	WG2314499
Silver	0.102	J	0.0865	0.500	5	06/29/2024 15:53	WG2314499
Zinc	32.7		0.740	25.0	5	06/29/2024 15:53	WG2314499

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.929		1	07/01/2024 16:32	WG2314092

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	07/03/2024 00:07	WG2313076

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.62	T8	1	07/02/2024 08:30	WG2314937

Sample Narrative:

L1750362-07 WG2314937: 7.62 at 21.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1260		10.0	1	06/30/2024 15:46	WG2314933

Sample Narrative:

L1750362-07 WG2314933: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.337		0.0167	0.200	1	07/02/2024 21:50	WG2314110

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.64		0.100	1.00	5	06/29/2024 15:56	WG2314499
Barium	77.0		0.152	2.50	5	06/29/2024 15:56	WG2314499
Cadmium	U		0.0855	1.00	5	06/29/2024 15:56	WG2314499
Copper	5.69		0.132	5.00	5	06/29/2024 15:56	WG2314499
Lead	6.92		0.0990	2.00	5	06/29/2024 15:56	WG2314499
Nickel	5.06		0.197	2.50	5	06/29/2024 15:56	WG2314499
Selenium	0.259	J	0.180	2.50	5	06/29/2024 15:56	WG2314499
Silver	U		0.0865	0.500	5	06/29/2024 15:56	WG2314499
Zinc	16.7	J	0.740	25.0	5	06/29/2024 15:56	WG2314499

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.04		1	07/01/2024 16:36	WG2314092

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	07/03/2024 00:16	WG2313076

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.67	T8	1	07/02/2024 08:30	WG2314937

Sample Narrative:

L1750362-08 WG2314937: 7.67 at 21.5C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1230		10.0	1	06/30/2024 15:46	WG2314933

Sample Narrative:

L1750362-08 WG2314933: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.350		0.0167	0.200	1	07/02/2024 21:52	WG2314110

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.95		0.100	1.00	5	06/29/2024 15:59	WG2314499
Barium	84.8		0.152	2.50	5	06/29/2024 15:59	WG2314499
Cadmium	0.118	J	0.0855	1.00	5	06/29/2024 15:59	WG2314499
Copper	5.86		0.132	5.00	5	06/29/2024 15:59	WG2314499
Lead	7.56		0.0990	2.00	5	06/29/2024 15:59	WG2314499
Nickel	5.69		0.197	2.50	5	06/29/2024 15:59	WG2314499
Selenium	U		0.180	2.50	5	06/29/2024 15:59	WG2314499
Silver	U		0.0865	0.500	5	06/29/2024 15:59	WG2314499
Zinc	18.9	J	0.740	25.0	5	06/29/2024 15:59	WG2314499

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.11		1	07/01/2024 16:39	WG2314092

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	07/03/2024 00:25	WG2313076

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.68	T8	1	07/02/2024 08:30	WG2314937

Sample Narrative:

L1750362-09 WG2314937: 7.68 at 20.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1420		10.0	1	06/30/2024 15:46	WG2314933

Sample Narrative:

L1750362-09 WG2314933: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.376		0.0167	0.200	1	07/02/2024 21:54	WG2314110

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.41		0.100	1.00	5	06/29/2024 16:03	WG2314499
Barium	125		0.152	2.50	5	06/29/2024 16:03	WG2314499
Cadmium	0.0921	J	0.0855	1.00	5	06/29/2024 16:03	WG2314499
Copper	6.11		0.132	5.00	5	06/29/2024 16:03	WG2314499
Lead	7.02		0.0990	2.00	5	06/29/2024 16:03	WG2314499
Nickel	5.19		0.197	2.50	5	06/29/2024 16:03	WG2314499
Selenium	U		0.180	2.50	5	06/29/2024 16:03	WG2314499
Silver	U		0.0865	0.500	5	06/29/2024 16:03	WG2314499
Zinc	17.5	J	0.740	25.0	5	06/29/2024 16:03	WG2314499

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.354		1	07/01/2024 16:43	WG2314092

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	07/03/2024 00:43	WG2313076

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.77	T8	1	07/02/2024 08:30	WG2314937

Sample Narrative:

L1750362-10 WG2314937: 7.77 at 22C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	152		10.0	1	06/30/2024 15:46	WG2314933

Sample Narrative:

L1750362-10 WG2314933: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.358		0.0167	0.200	1	07/02/2024 21:56	WG2314110

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.79		0.100	1.00	5	06/29/2024 16:06	WG2314499
Barium	77.2		0.152	2.50	5	06/29/2024 16:06	WG2314499
Cadmium	0.103	J	0.0855	1.00	5	06/29/2024 16:06	WG2314499
Copper	5.64		0.132	5.00	5	06/29/2024 16:06	WG2314499
Lead	6.77		0.0990	2.00	5	06/29/2024 16:06	WG2314499
Nickel	6.56		0.197	2.50	5	06/29/2024 16:06	WG2314499
Selenium	U		0.180	2.50	5	06/29/2024 16:06	WG2314499
Silver	U		0.0865	0.500	5	06/29/2024 16:06	WG2314499
Zinc	15.2	J	0.740	25.0	5	06/29/2024 16:06	WG2314499

QUALITY CONTROL SUMMARY

L1750362-01,02,03,04,05,06

Method Blank (MB)

(MB) R4088887-1 07/01/24 13:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexavalent Chromium	U		0.255	1.00

L1750362-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1750362-04 07/01/24 15:07 • (DUP) R4088887-7 07/01/24 15:16

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	0.307	0.275	1	11.1	J	20

L1750378-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1750378-01 07/01/24 17:03 • (DUP) R4088887-8 07/01/24 17:12

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R4088887-2 07/01/24 13:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	9.73	97.3	80.0-120	

L1751072-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1751072-01 07/01/24 17:30 • (MS) R4088887-9 07/01/24 17:39 • (MSD) R4088887-10 07/01/24 17:48

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	18.8	19.1	93.9	95.3	1	75.0-125			1.45	20

L1751072-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1751072-01 07/01/24 17:30 • (MS) R4088887-11 07/01/24 17:57

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	641	U	621	96.9	50	75.0-125	

Method Blank (MB)

(MB) R4089436-1 07/02/24 23:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexavalent Chromium	U		0.255	1.00

L1750362-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1750362-09 07/03/24 00:25 • (DUP) R4089436-3 07/03/24 00:34

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

L1751996-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1751996-02 07/03/24 04:44 • (DUP) R4089436-12 07/03/24 05:11

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	0.286	1	200	J P1	20

Laboratory Control Sample (LCS)

(LCS) R4089436-2 07/02/24 23:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	10.7	107	80.0-120	

L1750930-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1750930-05 07/03/24 01:54 • (MS) R4089436-5 07/03/24 02:12 • (MSD) R4089436-6 07/03/24 02:21

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	19.3	12.4	96.3	62.2	1	75.0-125		J3 J6	43.0	20

L1750930-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1750930-07 07/03/24 02:48 • (MS) R4089436-9 07/03/24 03:24 • (MSD) R4089436-10 07/03/24 03:33

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	18.8	20.2	93.8	101	1	75.0-125			7.52	20

L1750930-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1750930-05 07/03/24 01:54 • (MS) R4089436-7 07/03/24 02:30

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	648	U	467	72.0	50	75.0-125	J6

L1750930-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1750930-07 07/03/24 02:48 • (MS) R4089436-11 07/03/24 03:42

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	656	U	569	86.7	50	75.0-125	

L1750362-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1750362-02 07/02/24 08:30 • (DUP) R4088990-2 07/02/24 08:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.68	7.73	1	0.649		1

Sample Narrative:

OS: 7.68 at 21.3C

DUP: 7.73 at 21C

L1750945-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1750945-04 07/02/24 08:30 • (DUP) R4088990-3 07/02/24 08:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.24	8.22	1	0.243		1

Sample Narrative:

OS: 8.24 at 20.7C

DUP: 8.22 at 20.9C

Laboratory Control Sample (LCS)

(LCS) R4088990-1 07/02/24 08:30

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.03 at 20.7C

Method Blank (MB)

(MB) R4088353-1 06/30/24 15:46

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

Sample Narrative:
BLANK: at 25C

L1750362-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1750362-01 06/30/24 15:46 • (DUP) R4088353-3 06/30/24 15:46

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	2350	2390	1	1.60		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1750945-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1750945-10 06/30/24 15:46 • (DUP) R4088353-4 06/30/24 15:46

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	745	753	1	1.07		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4088353-2 06/30/24 15:46

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	741	101	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R4089433-1 07/02/24 21:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R4089433-2 07/02/24 21:43 • (LCSD) R4089433-3 07/02/24 21:45

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 %
Hot Water Sol. Boron	1.00	1.08	1.11	108	111	80.0-120			2.38	20

Method Blank (MB)

(MB) R4089434-1 07/02/24 22:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R4089434-2 07/02/24 22:13 • (LCSD) R4089434-3 07/02/24 22:15

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 %
Hot Water Sol. Boron	1.00	1.04	1.04	104	104	80.0-120			0.438	20

QUALITY CONTROL SUMMARY

L1750362-01,02

Method Blank (MB)

(MB) R4088835-1 07/01/24 17:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4088835-2 07/01/24 17:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	102	102	80.0-120	
Barium	100	104	104	80.0-120	
Cadmium	100	102	102	80.0-120	
Copper	100	99.7	99.7	80.0-120	
Lead	100	97.5	97.5	80.0-120	
Nickel	100	106	106	80.0-120	
Selenium	100	98.7	98.7	80.0-120	
Silver	20.0	22.4	112	80.0-120	
Zinc	100	99.7	99.7	80.0-120	

L1749834-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1749834-11 07/01/24 17:12 • (MS) R4088835-5 07/01/24 17:22 • (MSD) R4088835-6 07/01/24 17:25

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	2.19	105	103	103	101	5	75.0-125			2.08	20
Barium	100	41.8	153	152	111	111	5	75.0-125			0.245	20
Cadmium	100	U	107	108	107	108	5	75.0-125			0.936	20
Copper	100	2.43	108	106	106	104	5	75.0-125			1.73	20
Lead	100	3.50	106	109	103	106	5	75.0-125			2.66	20
Nickel	100	3.17	110	109	107	105	5	75.0-125			1.13	20
Selenium	100	0.377	103	102	103	102	5	75.0-125			0.641	20
Silver	20.0	U	23.1	23.2	115	116	5	75.0-125			0.501	20
Zinc	100	14.5	116	113	101	98.5	5	75.0-125			2.47	20

QUALITY CONTROL SUMMARY

L1750362-03,04,05,06,07,08,09,10

Method Blank (MB)

(MB) R4088282-1 06/29/24 14:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4088282-2 06/29/24 15:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	96.1	96.1	80.0-120	
Barium	100	99.6	99.6	80.0-120	
Cadmium	100	93.1	93.1	80.0-120	
Copper	100	90.4	90.4	80.0-120	
Lead	100	96.1	96.1	80.0-120	
Nickel	100	98.4	98.4	80.0-120	
Selenium	100	93.0	93.0	80.0-120	
Silver	20.0	19.5	97.3	80.0-120	
Zinc	100	93.7	93.7	80.0-120	

L1750675-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1750675-02 06/29/24 15:04 • (MS) R4088282-5 06/29/24 15:14 • (MSD) R4088282-6 06/29/24 15:17

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	2.35	96.1	83.2	93.7	80.8	5	75.0-125			14.4	20
Barium	100	118	222	179	104	60.9	5	75.0-125	E	J3 J6	21.5	20
Cadmium	100	41.7	133	102	91.0	59.9	5	75.0-125		J3 J6	26.6	20
Copper	100	76.8	214	120	137	43.2	5	75.0-125	J5	J3 J6	56.3	20
Lead	100	400	330	211	0.000	0.000	5	75.0-125	J6	J3 J6	44.1	20
Nickel	100	13.8	111	93.2	96.9	79.4	5	75.0-125			17.1	20
Selenium	100	U	95.4	80.9	95.4	80.9	5	75.0-125			16.4	20
Silver	20.0	2.71	22.3	18.7	97.8	80.1	5	75.0-125			17.3	20
Zinc	100	295	322	214	26.6	0.000	5	75.0-125	J6	J3 J6	40.3	20

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.
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.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
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.
T8	Sample(s) received past/too close to holding time expiration.

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 6]	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.

Company Name/Address:
Civitas/Tasman - CO
6855 W. 118th Ave
Broomfield, CO 80020

Billing Information:
Accounts Payable
650 Southgate Dr.
Windsor, CO 80550

Pres Chk

Project Manager:
Sam Vogt / Jacob Evans

Email: **svogt@tasman-geo.com; jevans@civitasresources.com**

Project Name: State Bierdstadt 4-65 35-34 2AH

Please Circle: PT MT CT ET

Phone: **610-405-9078**

Lab Project #:

AFE# or C/C: P1672CD

Collected by (print): Daniel Hensel

Site/Facility ID #:

Billing Code #: 8311.542

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___Same Day ___Five Day
___Next Day ___5 Day (Rad Only)
___Two Day ___10 Day (Rad Only)
___Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

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.pacelabs.com/hubfs/pas-standard- terms.pdf

SDG # 730362
A157

Acctnum: **CIVTASBCO**
Template: **T250702**
Prelogin: **P1068185**
PM: **824 - Chris Ward**
PB:
Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	# of Containers	Full TABLE915 8ozClr-NoPres	Background TABLE915 8ozClr-NoPres	V8260 (GW TABLE915) 40mL Amb-HCl 8021	Chloride, Sulfate 125mL HDPE-NoPres	TDS 1L-HDPE-NoPres	pH, EC, SAR	Boron	metals			Remarks	Sample # (lab only)
BG01e3'	Grab	SS	3'	6/21/24	1000	2						X	X	X				-01
BG01e4'			4'		1015													-02
BG02e3'			3'		1030													-03
BG02e4'			4'		1045													-04
BG03e3'			3'		1100													-05
BG03e4'			4'		1115													-06
BG04e3'			3'		1130													-07
BG04e4'			4'		1145													-08
BG05e3'			3'		1200													-09
BG05e4'			4'		1215													-10

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
pH, EC, SAR by saturated paste preparation method
Boron by hot water soluble preparation method
Table 915-1 Metals - As, Ba, Cd, Cu, Pb, Ni, Se, Ag, Zn, Cr VI

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 7315 3201 3578

Sample Receipt Checklist
COC Seal Present/Intact: __NP __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:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	6/21/24	1546			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
	6/24/24	18:00	FedEx	EOAT 17.3=4	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / OK
				6-25-24 8:00	