

## Civitas - CO

Sample Delivery Group: L1789677  
Samples Received: 10/16/2024  
Project Number: 24502  
Description: Vessel 12-30 WH & FL

Report To: Sam Vogt / Jacob Evans  
6855 W. 118th Ave  
Broomfield, CO 80020

Entire Report Reviewed By:



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.

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# SAMPLE SUMMARY

## BG01 @ 4' L1789677-01 Solid

Collected by Max Sherwin      Collected date/time 10/14/24 00:00      Received date/time 10/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2385518	1	10/24/24 19:04	10/24/24 19:04	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2384516	1	10/22/24 13:55	10/23/24 01:02	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2388801	1	10/24/24 14:35	10/24/24 17:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2388813	1	10/24/24 14:37	10/24/24 15:07	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2385532	1	10/22/24 20:14	10/23/24 08:35	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2384865	5	10/18/24 10:54	10/18/24 23:23	UNP	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## BG01 @ 6' L1789677-02 Solid

Collected by Max Sherwin      Collected date/time 10/14/24 00:00      Received date/time 10/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2385518	1	10/24/24 19:06	10/24/24 19:06	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2384516	1	10/22/24 13:55	10/23/24 01:08	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2388801	1	10/24/24 14:35	10/24/24 17:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2388813	1	10/24/24 14:37	10/24/24 15:07	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2385532	1	10/22/24 20:14	10/23/24 08:37	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2384865	5	10/18/24 10:54	10/18/24 23:26	UNP	Mt. Juliet, TN

## BG02 @ 4' L1789677-03 Solid

Collected by Max Sherwin      Collected date/time 10/14/24 00:00      Received date/time 10/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2385509	1	10/25/24 16:41	10/25/24 16:41	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2384516	1	10/22/24 13:55	10/23/24 01:14	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2389298	1	10/25/24 09:11	10/25/24 11:15	BRT	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2389303	1	10/25/24 09:12	10/25/24 15:30	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2385528	1	10/22/24 20:12	10/23/24 03:30	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2384865	5	10/18/24 10:54	10/18/24 23:30	UNP	Mt. Juliet, TN

## BG02 @ 6' L1789677-04 Solid

Collected by Max Sherwin      Collected date/time 10/14/24 00:00      Received date/time 10/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2385518	1	10/24/24 19:07	10/24/24 19:07	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2384516	1	10/22/24 13:55	10/23/24 01:27	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2388801	1	10/24/24 14:35	10/24/24 17:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2388813	1	10/24/24 14:37	10/24/24 15:07	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2385532	1	10/22/24 20:14	10/23/24 08:40	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2384321	5	10/22/24 08:25	10/22/24 17:58	UNP	Mt. Juliet, TN

## BG03 @ 4' L1789677-05 Solid

Collected by Max Sherwin      Collected date/time 10/14/24 00:00      Received date/time 10/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2385518	1	10/24/24 19:09	10/24/24 19:09	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2384516	1	10/22/24 13:55	10/23/24 01:33	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2388801	1	10/24/24 14:35	10/24/24 17:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2388813	1	10/24/24 14:37	10/24/24 15:07	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2385532	1	10/22/24 20:14	10/23/24 08:43	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2384321	5	10/22/24 08:25	10/22/24 18:02	UNP	Mt. Juliet, TN

# SAMPLE SUMMARY

## BG03 @ 6' L1789677-06 Solid

Collected by Max Sherwin      Collected date/time 10/14/24 00:00      Received date/time 10/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2385518	1	10/24/24 19:14	10/24/24 19:14	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2384516	1	10/22/24 13:55	10/23/24 01:51	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2391529	1	10/29/24 14:07	10/29/24 14:39	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2388813	1	10/24/24 14:37	10/24/24 15:07	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2385532	1	10/22/24 20:14	10/23/24 08:51	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2384321	5	10/22/24 08:25	10/22/24 18:05	UNP	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## BG04 @ 4' L1789677-07 Solid

Collected by Max Sherwin      Collected date/time 10/14/24 00:00      Received date/time 10/16/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2385518	1	10/24/24 19:16	10/24/24 19:16	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2384516	1	10/22/24 13:55	10/23/24 01:58	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2388801	1	10/24/24 14:35	10/24/24 17:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2388813	1	10/24/24 14:37	10/24/24 15:07	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2385532	1	10/22/24 20:14	10/23/24 08:54	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2384321	5	10/22/24 08:25	10/22/24 18:08	UNP	Mt. Juliet, TN

## BG04 @ 6' L1789677-08 Solid

Collected by Max Sherwin      Collected date/time 10/14/24 00:00      Received date/time 10/16/24 09:00

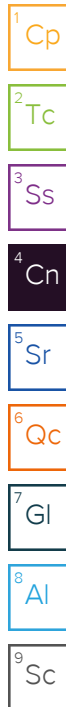
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2385518	1	10/24/24 19:18	10/24/24 19:18	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2384516	1	10/22/24 13:55	10/23/24 02:04	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2388801	1	10/24/24 14:35	10/24/24 17:10	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2388813	1	10/24/24 14:37	10/24/24 15:07	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2385532	1	10/22/24 20:14	10/23/24 08:57	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2384865	5	10/18/24 10:54	10/18/24 23:33	UNP	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

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Level II Report - Version 1: 10/29/24 15:12

## Project Narrative

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The requested project specific reporting limits may be less than laboratory standard quantitation limits (PQL) but will be greater than or equal to the laboratory method detection limits (MDL). It is noted that results reported below lab standard quantitation limits (PQLs) may result in false positive/false negative values that may require additional laboratory quality assurance review, if requested. Routine laboratory procedures do not initiate a data review process for detections below the laboratory's PQL unless requested by the client.

The requested project specific reporting limits may be less than laboratory standard quantitation limits (PQL) but will be greater than or equal to the laboratory method detection limits (MDL). It is noted that results reported below lab standard quantitation limits (PQLs) may result in false positive/false negative values that may require additional laboratory quality assurance review, if requested. Routine laboratory procedures do not initiate a data review process for detections below the laboratory's PQL unless requested by the client.

Report reissued by Chris Ward 10/29 for corrected sample IDs (BF to BG). Requested by Logan Molson 10/29

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.81		1	10/24/2024 19:04	WG2385518

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	10/23/2024 01:02	<a href="#">WG2384516</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.81	<u>T8</u>	1	10/24/2024 17:10	<a href="#">WG2388801</a>

Sample Narrative:

L1789677-01 WG2388801: 7.81 at 20.6C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Specific Conductance	1070	umhos/cm		10.0	1	10/24/2024 15:07	<a href="#">WG2388813</a>

Sample Narrative:

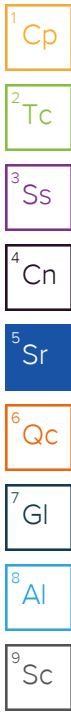
L1789677-01 WG2388813: at 25C

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

Analyte	Result mg/l	Qualifier	RL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		2.00	1	10/23/2024 08:35	<a href="#">WG2385532</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.56		0.200	5	10/18/2024 23:23	<a href="#">WG2384865</a>
Barium	94.3		0.400	5	10/18/2024 23:23	<a href="#">WG2384865</a>
Cadmium	ND		0.200	5	10/18/2024 23:23	<a href="#">WG2384865</a>
Copper	12.5		0.400	5	10/18/2024 23:23	<a href="#">WG2384865</a>
Lead	9.38		0.200	5	10/18/2024 23:23	<a href="#">WG2384865</a>
Nickel	14.3		0.400	5	10/18/2024 23:23	<a href="#">WG2384865</a>
Selenium	0.445	<u>J</u>	0.260	5	10/18/2024 23:23	<a href="#">WG2384865</a>
Silver	0.0962	<u>J</u>	0.0865	5	10/18/2024 23:23	<a href="#">WG2384865</a>
Zinc	40.2		0.740	5	10/18/2024 23:23	<a href="#">WG2384865</a>



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.05		1	10/24/2024 19:06	WG2385518

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	10/23/2024 01:08	<a href="#">WG2384516</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.68	<u>T8</u>	1	10/24/2024 17:10	<a href="#">WG2388801</a>

Sample Narrative:

L1789677-02 WG2388801: 7.68 at 20.7C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Specific Conductance	1400	umhos/cm		10.0	1	10/24/2024 15:07	<a href="#">WG2388813</a>

Sample Narrative:

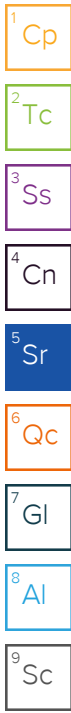
L1789677-02 WG2388813: at 25C

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

Analyte	Result mg/l	Qualifier	RL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		2.00	1	10/23/2024 08:37	<a href="#">WG2385532</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.51		0.200	5	10/18/2024 23:26	<a href="#">WG2384865</a>
Barium	73.1		0.400	5	10/18/2024 23:26	<a href="#">WG2384865</a>
Cadmium	ND		0.200	5	10/18/2024 23:26	<a href="#">WG2384865</a>
Copper	7.98		0.400	5	10/18/2024 23:26	<a href="#">WG2384865</a>
Lead	6.57		0.200	5	10/18/2024 23:26	<a href="#">WG2384865</a>
Nickel	9.15		0.400	5	10/18/2024 23:26	<a href="#">WG2384865</a>
Selenium	0.270	<u>J</u>	0.260	5	10/18/2024 23:26	<a href="#">WG2384865</a>
Silver	ND		0.0865	5	10/18/2024 23:26	<a href="#">WG2384865</a>
Zinc	27.8		0.740	5	10/18/2024 23:26	<a href="#">WG2384865</a>



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.703		1	10/25/2024 16:41	WG2385509

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	10/23/2024 01:14	<a href="#">WG2384516</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.02	<u>T8</u>	1	10/25/2024 11:15	<a href="#">WG2389298</a>

Sample Narrative:

L1789677-03 WG2389298: 8.02 at 20.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Specific Conductance	366	umhos/cm		10.0	1	10/25/2024 15:30	<a href="#">WG2389303</a>

Sample Narrative:

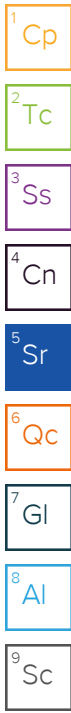
L1789677-03 WG2389303: at 25C

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

Analyte	Result mg/l	Qualifier	RL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		2.00	1	10/23/2024 03:30	<a href="#">WG2385528</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.70		0.200	5	10/18/2024 23:30	<a href="#">WG2384865</a>
Barium	87.6		0.400	5	10/18/2024 23:30	<a href="#">WG2384865</a>
Cadmium	ND		0.200	5	10/18/2024 23:30	<a href="#">WG2384865</a>
Copper	6.65		0.400	5	10/18/2024 23:30	<a href="#">WG2384865</a>
Lead	5.95		0.200	5	10/18/2024 23:30	<a href="#">WG2384865</a>
Nickel	7.93		0.400	5	10/18/2024 23:30	<a href="#">WG2384865</a>
Selenium	ND		0.260	5	10/18/2024 23:30	<a href="#">WG2384865</a>
Silver	ND		0.0865	5	10/18/2024 23:30	<a href="#">WG2384865</a>
Zinc	22.2	<u>J</u>	0.740	5	10/18/2024 23:30	<a href="#">WG2384865</a>



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.64		1	10/24/2024 19:07	WG2385518

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	10/23/2024 01:27	<a href="#">WG2384516</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.06	<u>T8</u>	1	10/24/2024 17:10	<a href="#">WG2388801</a>

Sample Narrative:

L1789677-04 WG2388801: 8.06 at 20.7C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Specific Conductance	646	umhos/cm		10.0	1	10/24/2024 15:07	<a href="#">WG2388813</a>

Sample Narrative:

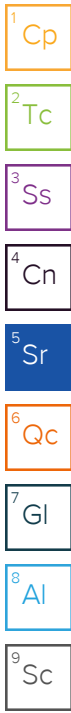
L1789677-04 WG2388813: at 25C

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

Analyte	Result mg/l	Qualifier	RL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		2.00	1	10/23/2024 08:40	<a href="#">WG2385532</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.82		0.200	5	10/22/2024 17:58	<a href="#">WG2384321</a>
Barium	134		0.400	5	10/22/2024 17:58	<a href="#">WG2384321</a>
Cadmium	ND		0.200	5	10/22/2024 17:58	<a href="#">WG2384321</a>
Copper	11.0		0.400	5	10/22/2024 17:58	<a href="#">WG2384321</a>
Lead	8.67		0.200	5	10/22/2024 17:58	<a href="#">WG2384321</a>
Nickel	12.2		0.400	5	10/22/2024 17:58	<a href="#">WG2384321</a>
Selenium	1.00	<u>J</u>	0.260	5	10/22/2024 17:58	<a href="#">WG2384321</a>
Silver	ND		0.0865	5	10/22/2024 17:58	<a href="#">WG2384321</a>
Zinc	40.2		0.740	5	10/22/2024 17:58	<a href="#">WG2384321</a>



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.20		1	10/24/2024 19:09	WG2385518

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

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	10/23/2024 01:33	<a href="#">WG2384516</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.11	<u>T8</u>	1	10/24/2024 17:10	<a href="#">WG2388801</a>

Sample Narrative:

L1789677-05 WG2388801: 8.11 at 20.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Specific Conductance	365	umhos/cm		10.0	1	10/24/2024 15:07	<a href="#">WG2388813</a>

Sample Narrative:

L1789677-05 WG2388813: at 25C

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

Analyte	Result mg/l	Qualifier	RL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		2.00	1	10/23/2024 08:43	<a href="#">WG2385532</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.16		0.200	5	10/22/2024 18:02	<a href="#">WG2384321</a>
Barium	194		0.400	5	10/22/2024 18:02	<a href="#">WG2384321</a>
Cadmium	ND		0.200	5	10/22/2024 18:02	<a href="#">WG2384321</a>
Copper	11.7		0.400	5	10/22/2024 18:02	<a href="#">WG2384321</a>
Lead	9.28		0.200	5	10/22/2024 18:02	<a href="#">WG2384321</a>
Nickel	13.6		0.400	5	10/22/2024 18:02	<a href="#">WG2384321</a>
Selenium	1.01	<u>J</u>	0.260	5	10/22/2024 18:02	<a href="#">WG2384321</a>
Silver	ND		0.0865	5	10/22/2024 18:02	<a href="#">WG2384321</a>
Zinc	42.5		0.740	5	10/22/2024 18:02	<a href="#">WG2384321</a>

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	8.33		1	10/24/2024 19:14	WG2385518

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	10/23/2024 01:51	<a href="#">WG2384516</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.54	<u>T8</u>	1	10/29/2024 14:39	<a href="#">WG2391529</a>

Sample Narrative:

L1789677-06 WG2391529: 8.54 at 22.2C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Specific Conductance	515	umhos/cm		10.0	1	10/24/2024 15:07	<a href="#">WG2388813</a>

Sample Narrative:

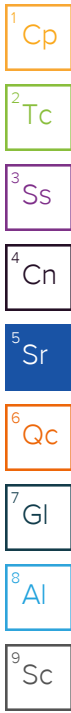
L1789677-06 WG2388813: at 25C

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

Analyte	Result mg/l	Qualifier	RL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		2.00	1	10/23/2024 08:51	<a href="#">WG2385532</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.89		0.200	5	10/22/2024 18:05	<a href="#">WG2384321</a>
Barium	151		0.400	5	10/22/2024 18:05	<a href="#">WG2384321</a>
Cadmium	ND		0.200	5	10/22/2024 18:05	<a href="#">WG2384321</a>
Copper	11.1		0.400	5	10/22/2024 18:05	<a href="#">WG2384321</a>
Lead	8.58		0.200	5	10/22/2024 18:05	<a href="#">WG2384321</a>
Nickel	12.7		0.400	5	10/22/2024 18:05	<a href="#">WG2384321</a>
Selenium	0.778	<u>J</u>	0.260	5	10/22/2024 18:05	<a href="#">WG2384321</a>
Silver	ND		0.0865	5	10/22/2024 18:05	<a href="#">WG2384321</a>
Zinc	42.2		0.740	5	10/22/2024 18:05	<a href="#">WG2384321</a>



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.45		1	10/24/2024 19:16	WG2385518

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

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	10/23/2024 01:58	<a href="#">WG2384516</a>

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.25	<u>T8</u>	1	10/24/2024 17:10	<a href="#">WG2388801</a>

Sample Narrative:

L1789677-07 WG2388801: 8.25 at 20.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Specific Conductance	536	umhos/cm		10.0	1	10/24/2024 15:07	<a href="#">WG2388813</a>

Sample Narrative:

L1789677-07 WG2388813: at 25C

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

Analyte	Result mg/l	Qualifier	RL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		2.00	1	10/23/2024 08:54	<a href="#">WG2385532</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.24		0.200	5	10/22/2024 18:08	<a href="#">WG2384321</a>
Barium	168		0.400	5	10/22/2024 18:08	<a href="#">WG2384321</a>
Cadmium	0.226	<u>J</u>	0.200	5	10/22/2024 18:08	<a href="#">WG2384321</a>
Copper	14.5		0.400	5	10/22/2024 18:08	<a href="#">WG2384321</a>
Lead	10.9		0.200	5	10/22/2024 18:08	<a href="#">WG2384321</a>
Nickel	15.8		0.400	5	10/22/2024 18:08	<a href="#">WG2384321</a>
Selenium	1.03	<u>J</u>	0.260	5	10/22/2024 18:08	<a href="#">WG2384321</a>
Silver	ND		0.0865	5	10/22/2024 18:08	<a href="#">WG2384321</a>
Zinc	51.3		0.740	5	10/22/2024 18:08	<a href="#">WG2384321</a>

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.38		1	10/24/2024 19:18	WG2385518

1 Cp

2 Tc

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	10/23/2024 02:04	<a href="#">WG2384516</a>

3 Ss

4 Cn

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.80	<u>T8</u>	1	10/24/2024 17:10	<a href="#">WG2388801</a>

5 Sr

6 Qc

Sample Narrative:

L1789677-08 WG2388801: 7.8 at 20C

7 Gl

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RL	Dilution	Analysis date / time	Batch
Specific Conductance	3060	umhos/cm		10.0	1	10/24/2024 15:07	<a href="#">WG2388813</a>

8 Al

9 Sc

Sample Narrative:

L1789677-08 WG2388813: at 25C

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

Analyte	Result mg/l	Qualifier	RL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		2.00	1	10/23/2024 08:57	<a href="#">WG2385532</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.66		0.200	5	10/18/2024 23:33	<a href="#">WG2384865</a>
Barium	120		0.400	5	10/18/2024 23:33	<a href="#">WG2384865</a>
Cadmium	ND		0.200	5	10/18/2024 23:33	<a href="#">WG2384865</a>
Copper	9.50		0.400	5	10/18/2024 23:33	<a href="#">WG2384865</a>
Lead	7.45		0.200	5	10/18/2024 23:33	<a href="#">WG2384865</a>
Nickel	10.9		0.400	5	10/18/2024 23:33	<a href="#">WG2384865</a>
Selenium	0.383	<u>J</u>	0.260	5	10/18/2024 23:33	<a href="#">WG2384865</a>
Silver	ND		0.0865	5	10/18/2024 23:33	<a href="#">WG2384865</a>
Zinc	33.6		0.740	5	10/18/2024 23:33	<a href="#">WG2384865</a>

Method Blank (MB)

(MB) R4136193-1 10/23/24 00:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Hexavalent Chromium	ND		0.255	1.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1789677-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1789677-03 10/23/24 01:14 • (DUP) R4136193-3 10/23/24 01:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Hexavalent Chromium	ND	ND	1	0.000		20

L1789878-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1789878-05 10/23/24 03:37 • (DUP) R4136193-8 10/23/24 03:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Hexavalent Chromium	0.456	0.406	1	11.7	↓	20

Laboratory Control Sample (LCS)

(LCS) R4136193-2 10/23/24 00:43

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Hexavalent Chromium	10.0	10.6	106	80.0-120	

L1789878-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789878-01 10/23/24 02:35 • (MS) R4136193-4 10/23/24 02:41 • (MSD) R4136193-5 10/23/24 02:47

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Hexavalent Chromium	20.0	ND	20.4	20.7	102	103	1	75.0-125			1.15	20

L1789878-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1789878-01 10/23/24 02:35 • (MS) R4136193-6 10/23/24 03:06

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Hexavalent Chromium	656	ND	595	90.7	50	75.0-125	

L1789495-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1789495-03 10/24/24 17:10 • (DUP) R4137327-2 10/24/24 17:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	9.41	9.44	1	0.318		1

Sample Narrative:

OS: 9.41 at 20.8C  
DUP: 9.44 at 20.7C

L1789677-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1789677-08 10/24/24 17:10 • (DUP) R4137327-3 10/24/24 17:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	7.80	7.80	1	0.000		1

Sample Narrative:

OS: 7.8 at 20C  
DUP: 7.8 at 20.2C

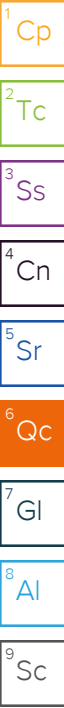
Laboratory Control Sample (LCS)

(LCS) R4137327-1 10/24/24 17:10

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
pH	10.0	9.99	99.9	99.0-101	

Sample Narrative:

LCS: 9.99 at 19.2C



L1789493-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1789493-02 10/25/24 11:15 • (DUP) R4137645-2 10/25/24 11:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	9.35	9.34	1	0.107		1

Sample Narrative:

OS: 9.35 at 20.3C  
DUP: 9.34 at 20.5C

Laboratory Control Sample (LCS)

(LCS) R4137645-1 10/25/24 11:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
pH	10.0	9.94	99.4	99.0-101	

Sample Narrative:

LCS: 9.94 at 20.1C

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1789677-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1789677-06 10/29/24 14:39 • (DUP) R4139117-2 10/29/24 14:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.54	8.55	1	0.117		1

Sample Narrative:

OS: 8.54 at 22.2C

DUP: 8.55 at 22.4C

Laboratory Control Sample (LCS)

(LCS) R4139117-1 10/29/24 14:39

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 at 20.4C

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4137210-1 10/24/24 15:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Specific Conductance	ND		10.0	10.0

Sample Narrative:

BLANK: at 25C

L1789570-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1789570-01 10/24/24 15:07 • (DUP) R4137210-3 10/24/24 15:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	17700	17700	1	0.000		20

Sample Narrative:

OS: at 25C  
DUP: at 25C

L1789873-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1789873-03 10/24/24 15:07 • (DUP) R4137210-4 10/24/24 15:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	1230	1210	1	1.31		20

Sample Narrative:

OS: at 25C  
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4137210-2 10/24/24 15:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Specific Conductance	733	732	99.9	85.0-115	

Sample Narrative:

LCS: at 25C

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4137777-1 10/25/24 15:30

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

Sample Narrative:

BLANK: at 25C

L1789493-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1789493-04 10/25/24 15:30 • (DUP) R4137777-3 10/25/24 15:30

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Specific Conductance	863	856	1	0.814		20

Sample Narrative:

OS: at 25C

DUP: at 25C

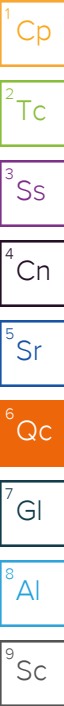
Laboratory Control Sample (LCS)

(LCS) R4137777-2 10/25/24 15:30

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	751	102	85.0-115	

Sample Narrative:

LCS: at 25C



Method Blank (MB)

(MB) R4136201-1 10/23/24 03:21

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

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

(LCS) R4136201-2 10/23/24 03:23 • (LCSD) R4136201-3 10/23/24 03:25

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	0.992	1.01	99.2	101	80.0-120			1.50	20

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

Method Blank (MB)

(MB) R4136682-1 10/23/24 08:18

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

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

(LCS) R4136682-2 10/23/24 08:21 • (LCSD) R4136682-3 10/23/24 08:24

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	1.01	1.03	101	103	80.0-120			1.77	20

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4136115-1 10/22/24 17:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Arsenic	ND		0.100	1.00
Barium	ND		0.152	2.50
Cadmium	ND		0.0855	1.00
Copper	ND		0.133	5.00
Lead	ND		0.0990	2.00
Nickel	ND		0.197	2.50
Selenium	ND		0.180	2.50
Silver	ND		0.0865	0.500
Zinc	0.823	↓	0.740	25.0

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

Laboratory Control Sample (LCS)

(LCS) R4136115-2 10/22/24 17:18

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Arsenic	100	97.0	97.0	80.0-120	
Barium	100	93.6	93.6	80.0-120	
Cadmium	100	98.9	98.9	80.0-120	
Copper	100	97.7	97.7	80.0-120	
Lead	100	94.4	94.4	80.0-120	
Nickel	100	100	100	80.0-120	
Selenium	100	94.7	94.7	80.0-120	
Silver	20.0	19.0	95.1	80.0-120	
Zinc	100	98.0	98.0	80.0-120	

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1789702-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789702-05 10/22/24 17:22 • (MS) R4136115-5 10/22/24 17:32 • (MSD) R4136115-6 10/22/24 17:35

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Arsenic	100	10.6	95.6	98.1	85.0	87.5	5	75.0-125			2.58	20
Barium	100	353	431	449	77.5	95.6	5	75.0-125			4.11	20
Cadmium	100	ND	88.7	90.7	88.5	90.6	5	75.0-125			2.25	20
Copper	100	13.6	94.8	97.7	81.2	84.1	5	75.0-125			3.02	20
Lead	100	22.1	104	106	81.6	83.6	5	75.0-125			1.92	20
Nickel	100	33.7	117	123	83.6	89.4	5	75.0-125			4.78	20
Selenium	100	1.48	86.7	89.5	85.2	88.1	5	75.0-125			3.18	20
Silver	20.0	ND	17.1	17.5	85.7	87.6	5	75.0-125			2.22	20
Zinc	100	70.1	155	161	84.6	90.6	5	75.0-125			3.82	20

Method Blank (MB)

(MB) R4134833-1 10/18/24 21:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	ND		0.100	1.00
Barium	ND		0.152	2.50
Cadmium	ND		0.0855	1.00
Copper	0.219	J	0.133	5.00
Lead	ND		0.0990	2.00
Nickel	ND		0.197	2.50
Selenium	ND		0.180	2.50
Silver	ND		0.0865	0.500
Zinc	ND		0.740	25.0

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

Laboratory Control Sample (LCS)

(LCS) R4134833-2 10/18/24 21:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	95.6	95.6	80.0-120	
Barium	100	92.3	92.3	80.0-120	
Cadmium	100	97.0	97.0	80.0-120	
Copper	100	92.8	92.8	80.0-120	
Lead	100	92.2	92.2	80.0-120	
Nickel	100	98.7	98.7	80.0-120	
Selenium	100	91.4	91.4	80.0-120	
Silver	20.0	19.2	96.1	80.0-120	
Zinc	100	96.8	96.8	80.0-120	

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1789495-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1789495-02 10/18/24 21:54 • (MS) R4134833-5 10/18/24 22:03 • (MSD) R4134833-6 10/18/24 22:06

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	5.88	92.5	92.7	86.7	86.8	5	75.0-125			0.160	20
Barium	100	140	219	210	79.2	70.3	5	75.0-125		J6	4.13	20
Cadmium	100	ND	88.7	87.7	88.6	87.6	5	75.0-125			1.23	20
Copper	100	6.96	91.1	88.0	84.2	81.1	5	75.0-125			3.44	20
Lead	100	8.95	91.6	90.3	82.6	81.4	5	75.0-125			1.38	20
Nickel	100	14.1	103	100	89.3	85.9	5	75.0-125			3.37	20
Selenium	100	0.409	84.5	84.7	84.0	84.3	5	75.0-125			0.310	20
Silver	20.0	ND	17.7	17.6	88.5	87.8	5	75.0-125			0.834	20
Zinc	100	35.7	121	119	85.1	83.5	5	75.0-125			1.36	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.
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.
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

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.
T8	Sample(s) received past/too close to holding time expiration.

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Company Name/Address: <b>Civitas/Tasman - CO</b> 6855 W. 118th Ave Broomfield, CO 80020	Billing Information: <b>Accounts Payable</b> 650 Southgate Dr. Windsor, CO 80550	Pres Chk
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Project Manager: <b>Sam Vogt / Jacob Evans</b>	Email: <b>svogt@tasman-geo.com;</b> <b>jevans@civitasresources.com</b>
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Project Name: <b>Vessel 12-30 WH&amp;FL</b>	Please Circle: PT (M) CT ET
---	--------------------------------

Phone: <b>610-405-9078</b>	Lab Project #:	AFE# or C/C: <b>24502</b>
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Collected by (print): <b>Max Sherwin</b>	Site/Facility ID #:	Billing Code #: <b>8523.198</b>
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Collected by (signature): <i>[Signature]</i>	<b>Rush?</b> (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day	Quote # <b>STP TAT</b>
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Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	# of Containers	Full TABLE915 8ozClr-NoPres	Background TABLE915 8ozClr-NoPres	V8260 (GW TABLE915) 40mL Amb-HCl	Chloride, Sulfate 125mL HDPE-NoPres	TDS 1L-HDPE-NoPres
BG01@4'	Grab	SS	4'	10/14/2024		2	X				
BG01@6'	↓	↓	6'			↓					
BG02@4'	↓	↓	4'			↓					
BG02@6'	↓	↓	6'			↓					
BG03@4'	↓	↓	4'			↓					
BG03@6'	↓	↓	6'			↓					
BG04@4'	↓	↓	4'			↓					
BG04@6'	↓	↓	6'			↓					

* 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 _____	Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headpace: <input type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input type="checkbox"/> Y <input type="checkbox"/> N RAD Screen <0.5 mR/hr: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
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Relinquished by: (Signature) <i>[Signature]</i>	Date: <b>10/14/2024</b>	Time: <b>17:11</b>	Received by: (Signature) <i>[Signature]</i>	Trip Blank Received: Yes / No HCL / MeOH TBR
Relinquished by: (Signature) <i>[Signature]</i>	Date: <b>10/14/24</b>	Time: <b>1800</b>	Received by: (Signature) <i>[Signature]</i>	Temp: _____ °C Bottles Received: <b>10</b> 10/13/24
Relinquished by: (Signature) <i>[Signature]</i>	Date: _____	Time: _____	Received for lab by: (Signature) <i>[Signature]</i>	Date: <b>10-16-24</b> Time: <b>0900</b>

Chain of Custody Page 1 of 1



**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/hubs/pas-standard-terms.pdf>

SDG # **L1789677**  
**B030**

Accnum: **CIVTASBCO**  
Template: **T250702**  
Prelogin: **P1068185**  
PM: **824 - Chris Ward**  
PB:

Shipped Via: **FedEX Ground**

Remarks	Sample # (lab only)
	-01
	-02
	-03
	-04
	-05
	-06
	-07
	-08