ANALYTICAL REPORT

September 11, 2024

Revised Report

Civitas - CO

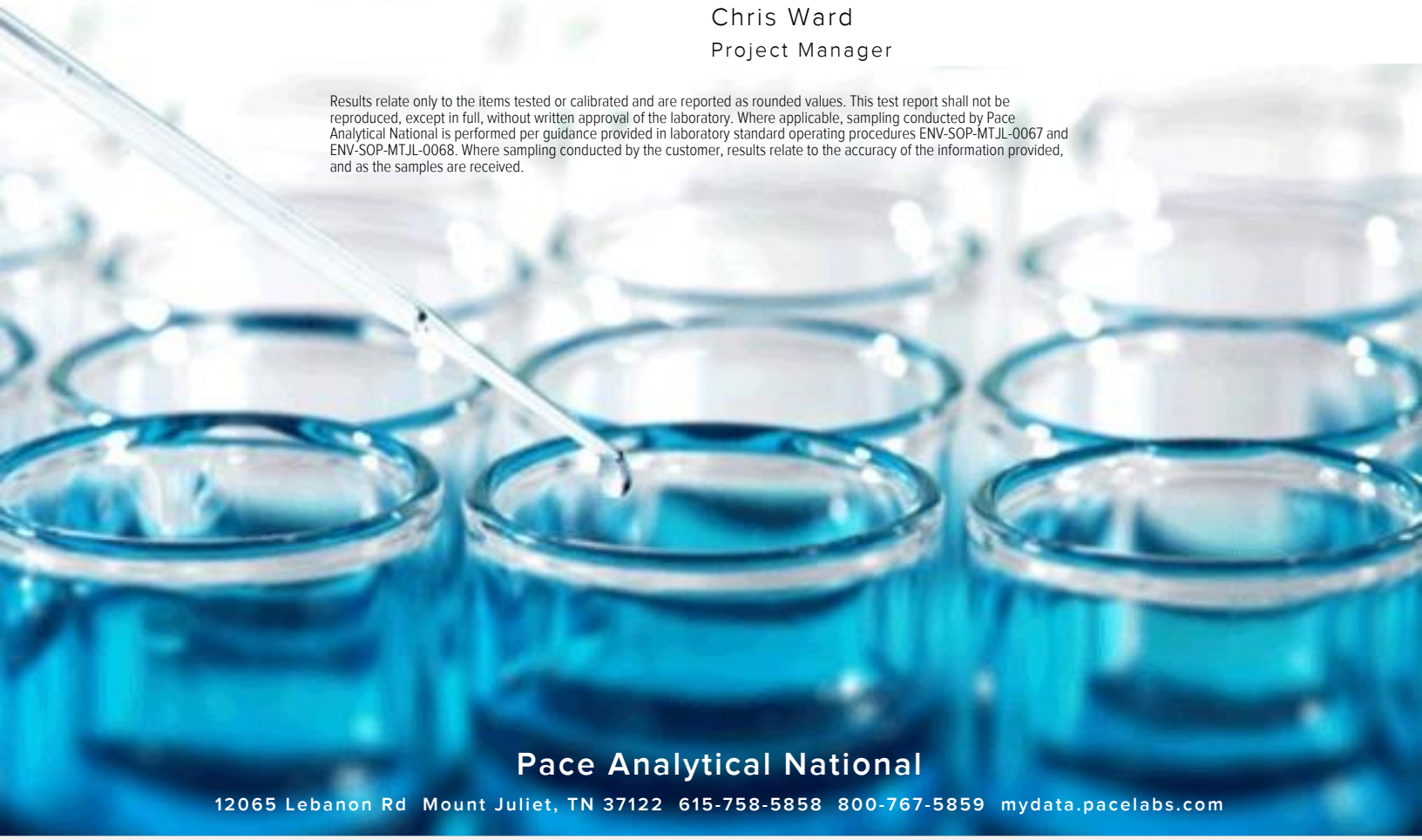
Sample Delivery Group:	L1769244
Samples Received:	08/20/2024
Project Number:	
Description:	North Platte K-0-13 HNC

Report To:

Jacob Evans
6855 W. 118th Ave
Broomfield, CO 80020

Entire Report Reviewed By:

Chris Ward
Project Manager



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NATIVE BG01 @ 3.5' L1769244-01 Solid

Collected by: Max Buffy | Collected date/time: 08/19/24 11:48 | Received date/time: 08/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2350400	1	08/26/24 21:50	08/26/24 21:50	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2349413	1	08/27/24 13:33	08/28/24 12:06	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2351022	1	08/27/24 09:26	08/27/24 10:58	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2351015	1	08/27/24 09:24	08/27/24 14:41	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2349807	1	08/30/24 09:02	08/30/24 15:59	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2350409	1	08/27/24 13:45	08/27/24 18:26	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2356695	5	09/06/24 07:40	09/06/24 16:28	UNP	Mt. Juliet, TN

NATIVE BG01 @ 7' L1769244-02 Solid

Collected by: Max Buffy | Collected date/time: 08/19/24 12:02 | Received date/time: 08/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2350400	1	08/26/24 21:52	08/26/24 21:52	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2349413	1	08/27/24 13:33	08/28/24 12:16	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2351019	1	08/27/24 09:37	08/27/24 10:46	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2351005	1	08/27/24 09:37	08/27/24 14:56	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2349807	1	08/30/24 09:02	08/30/24 16:01	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2350409	1	08/27/24 13:45	08/27/24 18:28	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2356695	5	09/06/24 07:40	09/06/24 16:32	UNP	Mt. Juliet, TN

NATIVE BG02 @ 3.5' L1769244-03 Solid

Collected by: Max Buffy | Collected date/time: 08/19/24 13:05 | Received date/time: 08/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2350400	1	08/26/24 21:53	08/26/24 21:53	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2349413	1	08/27/24 13:33	08/28/24 12:27	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2351019	1	08/27/24 09:37	08/27/24 10:46	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2351005	1	08/27/24 09:37	08/27/24 14:56	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2349807	1	08/30/24 09:02	08/30/24 16:03	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2350409	1	08/27/24 13:45	08/27/24 17:58	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2356695	5	09/06/24 07:40	09/06/24 16:35	UNP	Mt. Juliet, TN

NATIVE BG02 @ 7' L1769244-04 Solid

Collected by: Max Buffy | Collected date/time: 08/19/24 13:22 | Received date/time: 08/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2350400	1	08/26/24 21:58	08/26/24 21:58	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2349413	1	08/27/24 13:33	08/28/24 12:48	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2351019	1	08/27/24 09:37	08/27/24 10:46	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2351005	1	08/27/24 09:37	08/27/24 14:56	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2349807	1	08/30/24 09:02	08/30/24 16:04	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2350409	1	08/27/24 13:45	08/27/24 18:00	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2356695	5	09/06/24 07:40	09/06/24 17:05	UNP	Mt. Juliet, TN

NATIVE BG03 @ 3.5' L1769244-05 Solid

Collected by: Max Buffy | Collected date/time: 08/19/24 13:50 | Received date/time: 08/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2350400	1	08/26/24 22:00	08/26/24 22:00	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2349413	1	08/27/24 13:33	08/28/24 12:58	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2351022	1	08/27/24 09:26	08/27/24 10:58	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2351015	1	08/27/24 09:24	08/27/24 14:41	KA	Mt. Juliet, TN

NATIVE BG03 @ 3.5' L1769244-05 Solid

Collected by: Max Buffy | Collected date/time: 08/19/24 13:50 | Received date/time: 08/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B	WG2349807	1	08/30/24 09:02	08/30/24 16:06	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2350409	1	08/27/24 13:45	08/27/24 18:02	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2356695	5	09/06/24 07:40	09/06/24 17:09	UNP	Mt. Juliet, TN

NATIVE BG03 @ 7' L1769244-06 Solid

Collected by: Max Buffy | Collected date/time: 08/19/24 13:59 | Received date/time: 08/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2350400	1	08/26/24 22:02	08/26/24 22:02	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2349413	1	08/27/24 13:33	08/28/24 13:09	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2351022	1	08/27/24 09:26	08/27/24 10:58	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2351015	1	08/27/24 09:24	08/27/24 14:41	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2349807	1	08/30/24 09:02	08/30/24 16:08	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2350409	1	08/27/24 13:45	08/27/24 18:04	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2356695	5	09/06/24 07:40	09/06/24 17:12	UNP	Mt. Juliet, TN

NATIVE BG04 @ 3.5' L1769244-07 Solid

Collected by: Max Buffy | Collected date/time: 08/19/24 12:31 | Received date/time: 08/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2350400	1	08/26/24 22:03	08/26/24 22:03	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2349413	1	08/27/24 13:33	08/28/24 13:30	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2351022	1	08/27/24 09:26	08/27/24 10:58	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2351015	1	08/27/24 09:24	08/27/24 14:41	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2349807	1	08/30/24 09:02	08/30/24 16:09	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2350409	1	08/27/24 13:45	08/27/24 18:05	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2356695	5	09/06/24 07:40	09/06/24 17:15	UNP	Mt. Juliet, TN

NATIVE BG04 @ 7' L1769244-08 Solid

Collected by: Max Buffy | Collected date/time: 08/19/24 12:48 | Received date/time: 08/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2350400	1	08/26/24 22:05	08/26/24 22:05	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2349413	1	08/27/24 13:33	08/28/24 13:40	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2351019	1	08/27/24 09:37	08/27/24 10:46	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2351005	1	08/27/24 09:37	08/27/24 14:56	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2349807	1	08/30/24 09:02	08/30/24 16:11	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2350409	1	08/27/24 13:45	08/27/24 18:07	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2356695	5	09/06/24 07:40	09/06/24 17:19	UNP	Mt. Juliet, TN

NATIVE BG05 @ 3.5' L1769244-09 Solid

Collected by: Max Buffy | Collected date/time: 08/19/24 11:10 | Received date/time: 08/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2350400	1	08/26/24 22:07	08/26/24 22:07	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2349413	1	08/27/24 13:33	08/28/24 14:12	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2351019	1	08/27/24 09:37	08/27/24 10:46	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2351005	1	08/27/24 09:37	08/27/24 14:56	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2349807	1	08/30/24 09:02	08/30/24 16:13	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2350409	1	08/27/24 13:45	08/27/24 18:09	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2356695	5	09/06/24 07:40	09/06/24 17:22	UNP	Mt. Juliet, TN

SAMPLE SUMMARY

NATIVE BG05 @ 7' L1769244-10 Solid

Collected by: Max Buffy
Collected date/time: 08/19/24 11:25
Received date/time: 08/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2350400	1	08/26/24 22:08	08/26/24 22:08	JTM	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2349423	1	08/29/24 18:30	09/02/24 01:03	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2351022	1	08/27/24 09:26	08/27/24 10:58	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2351015	1	08/27/24 09:24	08/27/24 14:41	KA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2349807	1	08/30/24 09:02	08/30/24 15:42	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2350409	1	08/27/24 13:45	08/27/24 18:14	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2356695	5	09/06/24 07:40	09/06/24 17:25	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

Level II Report - Version 1: 09/09/24 12:11
Level II Report - Version 2: 09/09/24 12:29

Project Narrative

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 to correct project info

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.192		1	08/26/2024 21:50	WG2350400

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	08/28/2024 12:06	WG2349413

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.43	T8	1	08/27/2024 10:58	WG2351022

Sample Narrative:

L1769244-01 WG2351022: 7.43 at 21.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	148		10.0	1	08/27/2024 14:41	WG2351015

Sample Narrative:

L1769244-01 WG2351015: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.05	J	0.518	1	08/30/2024 15:59	WG2349807
Barium	25.5		0.400	1	08/30/2024 15:59	WG2349807
Cadmium	ND		0.200	1	08/30/2024 15:59	WG2349807
Copper	0.893	J	0.400	1	08/30/2024 15:59	WG2349807
Lead	1.74		0.208	1	08/30/2024 15:59	WG2349807
Nickel	1.26	J	0.400	1	08/30/2024 15:59	WG2349807
Selenium	ND		0.764	1	08/30/2024 15:59	WG2349807
Silver	ND		0.127	1	08/30/2024 15:59	WG2349807
Zinc	4.33	J	0.832	1	08/30/2024 15:59	WG2349807

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	08/27/2024 18:26	WG2350409

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Selenium	ND		0.260	5	09/06/2024 16:28	WG2356695

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.247		1	08/26/2024 21:52	WG2350400

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	08/28/2024 12:16	WG2349413

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.30	T8	1	08/27/2024 10:46	WG2351019

Sample Narrative:

L1769244-02 WG2351019: 8.3 at 21.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	118		10.0	1	08/27/2024 14:56	WG2351005

Sample Narrative:

L1769244-02 WG2351005: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.60	J	0.518	1	08/30/2024 16:01	WG2349807
Barium	21.7		0.400	1	08/30/2024 16:01	WG2349807
Cadmium	ND		0.200	1	08/30/2024 16:01	WG2349807
Copper	0.881	J	0.400	1	08/30/2024 16:01	WG2349807
Lead	1.28		0.208	1	08/30/2024 16:01	WG2349807
Nickel	0.829	J	0.400	1	08/30/2024 16:01	WG2349807
Selenium	ND		0.764	1	08/30/2024 16:01	WG2349807
Silver	ND		0.127	1	08/30/2024 16:01	WG2349807
Zinc	3.56	J	0.832	1	08/30/2024 16:01	WG2349807

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	08/27/2024 18:28	WG2350409

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Selenium	ND		0.260	5	09/06/2024 16:32	WG2356695

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.127		1	08/26/2024 21:53	WG2350400

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	08/28/2024 12:27	WG2349413

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.12	T8	1	08/27/2024 10:46	WG2351019

Sample Narrative:

L1769244-03 WG2351019: 7.12 at 21.9C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	37.1		10.0	1	08/27/2024 14:56	WG2351005

Sample Narrative:

L1769244-03 WG2351005: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.65	J	0.518	1	08/30/2024 16:03	WG2349807
Barium	32.4		0.400	1	08/30/2024 16:03	WG2349807
Cadmium	ND		0.200	1	08/30/2024 16:03	WG2349807
Copper	1.96	J	0.400	1	08/30/2024 16:03	WG2349807
Lead	4.11		0.208	1	08/30/2024 16:03	WG2349807
Nickel	2.32		0.400	1	08/30/2024 16:03	WG2349807
Selenium	ND		0.764	1	08/30/2024 16:03	WG2349807
Silver	ND		0.127	1	08/30/2024 16:03	WG2349807
Zinc	10.2		0.832	1	08/30/2024 16:03	WG2349807

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	08/27/2024 17:58	WG2350409

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Selenium	0.498	J	0.260	5	09/06/2024 16:35	WG2356695

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.188		1	08/26/2024 21:58	WG2350400

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	08/28/2024 12:48	WG2349413

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.17	T8	1	08/27/2024 10:46	WG2351019

Sample Narrative:

L1769244-04 WG2351019: 7.17 at 22.1C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	53.4		10.0	1	08/27/2024 14:56	WG2351005

Sample Narrative:

L1769244-04 WG2351005: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.13	J	0.518	1	08/30/2024 16:04	WG2349807
Barium	100		0.400	1	08/30/2024 16:04	WG2349807
Cadmium	ND		0.200	1	08/30/2024 16:04	WG2349807
Copper	1.78	J	0.400	1	08/30/2024 16:04	WG2349807
Lead	6.71		0.208	1	08/30/2024 16:04	WG2349807
Nickel	2.11		0.400	1	08/30/2024 16:04	WG2349807
Selenium	ND		0.764	1	08/30/2024 16:04	WG2349807
Silver	ND		0.127	1	08/30/2024 16:04	WG2349807
Zinc	8.61		0.832	1	08/30/2024 16:04	WG2349807

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	08/27/2024 18:00	WG2350409

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Selenium	ND		0.260	5	09/06/2024 17:05	WG2356695

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.127		1	08/26/2024 22:00	WG2350400

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	08/28/2024 12:58	WG2349413

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	6.91	T8	1	08/27/2024 10:58	WG2351022

Sample Narrative:

L1769244-05 WG2351022: 6.91 at 21C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	89.1		10.0	1	08/27/2024 14:41	WG2351015

Sample Narrative:

L1769244-05 WG2351015: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.21	J	0.518	1	08/30/2024 16:06	WG2349807
Barium	34.6		0.400	1	08/30/2024 16:06	WG2349807
Cadmium	ND		0.200	1	08/30/2024 16:06	WG2349807
Copper	1.83	J	0.400	1	08/30/2024 16:06	WG2349807
Lead	2.96		0.208	1	08/30/2024 16:06	WG2349807
Nickel	2.19		0.400	1	08/30/2024 16:06	WG2349807
Selenium	ND		0.764	1	08/30/2024 16:06	WG2349807
Silver	ND		0.127	1	08/30/2024 16:06	WG2349807
Zinc	8.84		0.832	1	08/30/2024 16:06	WG2349807

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	08/27/2024 18:02	WG2350409

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Selenium	0.288	J	0.260	5	09/06/2024 17:09	WG2356695

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.160		1	08/26/2024 22:02	WG2350400

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	08/28/2024 13:09	WG2349413

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.14	T8	1	08/27/2024 10:58	WG2351022

Sample Narrative:

L1769244-06 WG2351022: 8.14 at 21C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	190		10.0	1	08/27/2024 14:41	WG2351015

Sample Narrative:

L1769244-06 WG2351015: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.32	J	0.518	1	08/30/2024 16:08	WG2349807
Barium	44.6		0.400	1	08/30/2024 16:08	WG2349807
Cadmium	ND		0.200	1	08/30/2024 16:08	WG2349807
Copper	2.05		0.400	1	08/30/2024 16:08	WG2349807
Lead	3.68		0.208	1	08/30/2024 16:08	WG2349807
Nickel	3.11		0.400	1	08/30/2024 16:08	WG2349807
Selenium	ND		0.764	1	08/30/2024 16:08	WG2349807
Silver	ND		0.127	1	08/30/2024 16:08	WG2349807
Zinc	11.1		0.832	1	08/30/2024 16:08	WG2349807

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	08/27/2024 18:04	WG2350409

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Selenium	0.345	J	0.260	5	09/06/2024 17:12	WG2356695

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.169		1	08/26/2024 22:03	WG2350400

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	08/28/2024 13:30	WG2349413

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.18	T8	1	08/27/2024 10:58	WG2351022

Sample Narrative:

L1769244-07 WG2351022: 7.18 at 21.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	157		10.0	1	08/27/2024 14:41	WG2351015

Sample Narrative:

L1769244-07 WG2351015: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.54	J	0.518	1	08/30/2024 16:09	WG2349807
Barium	30.2		0.400	1	08/30/2024 16:09	WG2349807
Cadmium	ND		0.200	1	08/30/2024 16:09	WG2349807
Copper	1.72	J	0.400	1	08/30/2024 16:09	WG2349807
Lead	2.62		0.208	1	08/30/2024 16:09	WG2349807
Nickel	2.08		0.400	1	08/30/2024 16:09	WG2349807
Selenium	ND		0.764	1	08/30/2024 16:09	WG2349807
Silver	ND		0.127	1	08/30/2024 16:09	WG2349807
Zinc	8.51		0.832	1	08/30/2024 16:09	WG2349807

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	08/27/2024 18:05	WG2350409

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Selenium	0.341	J	0.260	5	09/06/2024 17:15	WG2356695

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.157		1	08/26/2024 22:05	WG2350400

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	08/28/2024 13:40	WG2349413

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.43	T8	1	08/27/2024 10:46	WG2351019

Sample Narrative:

L1769244-08 WG2351019: 7.43 at 22.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	39.5		10.0	1	08/27/2024 14:56	WG2351005

Sample Narrative:

L1769244-08 WG2351005: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.39	J	0.518	1	08/30/2024 16:11	WG2349807
Barium	33.9		0.400	1	08/30/2024 16:11	WG2349807
Cadmium	ND		0.200	1	08/30/2024 16:11	WG2349807
Copper	2.44		0.400	1	08/30/2024 16:11	WG2349807
Lead	2.79		0.208	1	08/30/2024 16:11	WG2349807
Nickel	1.91	J	0.400	1	08/30/2024 16:11	WG2349807
Selenium	ND		0.764	1	08/30/2024 16:11	WG2349807
Silver	ND		0.127	1	08/30/2024 16:11	WG2349807
Zinc	8.57		0.832	1	08/30/2024 16:11	WG2349807

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	08/27/2024 18:07	WG2350409

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Selenium	ND		0.260	5	09/06/2024 17:19	WG2356695

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.367		1	08/26/2024 22:07	WG2350400

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	08/28/2024 14:12	WG2349413

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.48	T8	1	08/27/2024 10:46	WG2351019

Sample Narrative:

L1769244-09 WG2351019: 8.48 at 22.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	168		10.0	1	08/27/2024 14:56	WG2351005

Sample Narrative:

L1769244-09 WG2351005: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	0.841	J	0.518	1	08/30/2024 16:13	WG2349807
Barium	35.2		0.400	1	08/30/2024 16:13	WG2349807
Cadmium	ND		0.200	1	08/30/2024 16:13	WG2349807
Copper	1.61	J	0.400	1	08/30/2024 16:13	WG2349807
Lead	2.45		0.208	1	08/30/2024 16:13	WG2349807
Nickel	2.06		0.400	1	08/30/2024 16:13	WG2349807
Selenium	ND		0.764	1	08/30/2024 16:13	WG2349807
Silver	ND		0.127	1	08/30/2024 16:13	WG2349807
Zinc	10.6		0.832	1	08/30/2024 16:13	WG2349807

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	08/27/2024 18:09	WG2350409

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Selenium	0.274	J	0.260	5	09/06/2024 17:22	WG2356695

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.351		1	08/26/2024 22:08	WG2350400

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.300	1	09/02/2024 01:03	WG2349423

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.90	T8	1	08/27/2024 10:58	WG2351022

Sample Narrative:

L1769244-10 WG2351022: 7.9 at 20.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	626		10.0	1	08/27/2024 14:41	WG2351015

Sample Narrative:

L1769244-10 WG2351015: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.02		0.518	1	08/30/2024 15:42	WG2349807
Barium	56.3		0.400	1	08/30/2024 15:42	WG2349807
Cadmium	ND		0.200	1	08/30/2024 15:42	WG2349807
Copper	1.90	J	0.400	1	08/30/2024 15:42	WG2349807
Lead	3.52		0.208	1	08/30/2024 15:42	WG2349807
Nickel	3.48		0.400	1	08/30/2024 15:42	WG2349807
Selenium	ND		0.764	1	08/30/2024 15:42	WG2349807
Silver	ND		0.127	1	08/30/2024 15:42	WG2349807
Zinc	13.4		0.832	1	08/30/2024 15:42	WG2349807

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	08/27/2024 18:14	WG2350409

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RL mg/kg	Dilution	Analysis date / time	Batch
Selenium	0.359	J	0.260	5	09/06/2024 17:25	WG2356695

Method Blank (MB)

(MB) R4113846-1 08/28/24 10:00

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

L1769244-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1769244-03 08/28/24 12:27 • (DUP) R4113846-7 08/28/24 12:37

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

L1769244-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1769244-06 08/28/24 13:09 • (DUP) R4113846-8 08/28/24 13:19

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

Laboratory Control Sample (LCS)

(LCS) R4113846-2 08/28/24 10:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	10.4	104	80.0-120	

L1769224-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1769224-01 08/28/24 10:31 • (MS) R4113846-3 08/28/24 10:42 • (MSD) R4113846-4 08/28/24 10:52

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	ND	4.44	8.72	22.2	43.6	1	75.0-125	J6	J3 J6	65.0	20

L1769224-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1769224-01 08/28/24 10:31 • (MS) R4113846-9 08/28/24 11:03

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	641	ND	475	74.1	50	75.0-125	J6

Method Blank (MB)

(MB) R4114530-1 09/02/24 00:49

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

L1770357-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1770357-04 09/02/24 02:49 • (DUP) R4114530-7 09/02/24 02:55

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

L1770357-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1770357-14 09/02/24 03:44 • (DUP) R4114530-8 09/02/24 03:50

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

Laboratory Control Sample (LCS)

(LCS) R4114530-2 09/02/24 00:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	10.1	101	80.0-120	

L1769244-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1769244-10 09/02/24 01:03 • (MS) R4114530-4 09/02/24 01:16 • (MSD) R4114530-5 09/02/24 01:22

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	ND	20.1	19.5	100	97.6	1	75.0-125			2.89	20

L1769244-10 Original Sample (OS) • Matrix Spike (MS)

(OS) L1769244-10 09/02/24 01:03 • (MS) R4114530-6 09/02/24 01:28

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	648	ND	593	91.6	50	75.0-125	

L1768286-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1768286-05 08/27/24 10:46 • (DUP) R4112135-2 08/27/24 10:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.79	7.79	1	0.000		1

Sample Narrative:

OS: 7.79 at 22.1C

DUP: 7.79 at 21.8C

L1769947-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1769947-06 08/27/24 10:46 • (DUP) R4112135-3 08/27/24 10:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.26	8.26	1	0.000		1

Sample Narrative:

OS: 8.26 at 21.1C

DUP: 8.26 at 21C

Laboratory Control Sample (LCS)

(LCS) R4112135-1 08/27/24 10:46

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

Sample Narrative:

LCS: 9.99 at 21.5C

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

L1769232-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1769232-01 08/27/24 10:58 • (DUP) R4112127-2 08/27/24 10:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.45	8.41	1	0.474		1

Sample Narrative:

OS: 8.45 at 21.3C

DUP: 8.41 at 21.3C

Laboratory Control Sample (LCS)

(LCS) R4112127-1 08/27/24 10:58

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 2.3C

Method Blank (MB)

(MB) R4112343-1 08/27/24 14:56

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

L1768286-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1768286-04 08/27/24 14:56 • (DUP) R4112343-3 08/27/24 14:56

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	141	143	1	1.83		20

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

L1769904-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1769904-05 08/27/24 14:56 • (DUP) R4112343-4 08/27/24 14:56

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	410	402	1	1.97		20

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

Laboratory Control Sample (LCS)

(LCS) R4112343-2 08/27/24 14:56

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	728	99.3	85.0-115	

Sample Narrative:
LCS: at 25C

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

Method Blank (MB)

(MB) R4112271-1 08/27/24 14:41

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

L1769244-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1769244-07 08/27/24 14:41 • (DUP) R4112271-3 08/27/24 14:41

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	157	143	1	8.81		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4112271-2 08/27/24 14:41

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	727	99.2	85.0-115	

Sample Narrative:

LCS: at 25C

Method Blank (MB)

(MB) R4114262-1 08/30/24 15:39

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	ND		0.518	2.00
Barium	1.61		0.0852	0.500
Cadmium	ND		0.0471	0.500
Copper	ND		0.400	2.00
Lead	ND		0.208	0.500
Nickel	ND		0.132	2.00
Selenium	ND		0.764	2.00
Silver	ND		0.127	1.00
Zinc	ND		0.832	5.00

Laboratory Control Sample (LCS)

(LCS) R4114262-2 08/30/24 15:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	99.5	99.5	80.0-120	
Barium	100	101	101	80.0-120	
Cadmium	100	96.5	96.5	80.0-120	
Copper	100	99.1	99.1	80.0-120	
Lead	100	95.9	95.9	80.0-120	
Nickel	100	95.9	95.9	80.0-120	
Selenium	100	92.6	92.6	80.0-120	
Silver	20.0	18.6	92.9	80.0-120	
Zinc	100	98.3	98.3	80.0-120	

L1769244-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1769244-10 08/30/24 15:42 • (MS) R4114262-5 08/30/24 15:48 • (MSD) R4114262-6 08/30/24 15:49

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	2.02	102	106	99.8	104	1	75.0-125			4.12	20
Barium	100	56.3	148	150	91.6	93.5	1	75.0-125			1.32	20
Cadmium	100	ND	97.8	101	97.7	101	1	75.0-125			3.72	20
Copper	100	1.90	102	107	101	105	1	75.0-125			4.07	20
Lead	100	3.52	102	106	98.2	102	1	75.0-125			3.94	20
Nickel	100	3.48	104	107	100	103	1	75.0-125			2.74	20
Selenium	100	ND	92.8	98.0	92.8	98.0	1	75.0-125			5.53	20
Silver	20.0	ND	19.1	19.9	95.3	99.4	1	75.0-125			4.14	20
Zinc	100	13.4	115	117	101	103	1	75.0-125			1.59	20

QUALITY CONTROL SUMMARY

L1769244-01,02,03,04,05,06,07,08,09,10

Method Blank (MB)

(MB) R4112520-1 08/27/24 17:53

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) R4112520-2 08/27/24 17:55 • (LCSD) R4112520-3 08/27/24 17:57

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	0.999	0.994	99.9	99.4	80.0-120			0.537	20

Method Blank (MB)

(MB) R4116672-2 09/06/24 16:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Selenium	ND		0.180	2.50

Laboratory Control Sample (LCS)

(LCS) R4116672-3 09/06/24 16:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Selenium	100	106	106	80.0-120	

L1773528-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773528-03 09/06/24 16:12 • (MS) R4116672-6 09/06/24 16:22 • (MSD) R4116672-7 09/06/24 16:25

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 %
Selenium	100	0.551	87.6	90.7	87.1	90.1	5	75.0-125			3.44	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.
J3	The associated batch QC was outside the established quality control range for precision.
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.

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	LAO000356
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-CO
6855 W. 118th Ave.
Broomfield, CO 80020

Billing Information: Accounts Payable
650 Southgate Dr.
Windsor, CO 80550
AFE: 24295

Report to: Jacob Evans

Email To: tlyon@ensolum.com
bsulzberger@ensolum.com
devans@civiresources.com

Project Description: North Platte K-0-13 HNC

City/State Collected: CO

Please Circle: PT (MT) CT ET

Phone:

Client Project #

Lab Project #

Collected by (print): Max Buffy

Site/Facility ID #

P.O. #

Collected by (signature): M. Buffy

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: Standard TAT

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

12065 Lebanon Rd Mount Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859

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 # L1769744
A081

Acctnum:
Template:
Prelogin:
PM:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	pH, EC, SAR, Boron	915 metals	Remarks	Sample # (lab only)
Native BG01 @3.5'	G	SS	3.5	8/19/24	1148	3	X	X		-01
Native BG01 @7'			7		1202					-02
Native BG02 @ 3.5'			3.5		1305					-03
Native BG02 @ 7'			7		1322					-04
Native BG03 @ 3.5'			3.5		1350					-05
Native BG03 @ 7'			7		1359					-06
Native BG04 @ 3.5'			3.5		1231					-07
Native BG04 @ 7'			7		1248					-08
Native BG05 @ 3.5'			3.5		1116					-09
Native BG05 @ 7'			7		1125					-10

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

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)
M. Buffy	8/19/24	1550	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/19/24	1600	FedEx
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: °C Bottles Received: 30

Date: 8/20/24 Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

LTL9244

Tracking Numbers	Temperature
9102916608 17	2.0+0.3=2.3
9102916607 14	0.9+0.3=1.2
9102916608 39	1.4+0.3=1.7
9102916607 25	3.6+0.3=3.9
~~7315 3144 0937~~	

Name

8/20

Date