

**Confluence Compliance Companies - CO**

Sample Delivery Group: L1494266  
Samples Received: 05/14/2022  
Project Number: FEDERAL 1-30  
Description: P & A  
Site: FEDERAL 1-30  
Report To: Chris McKisson  
403 ½ Rockwood Lane  
Grand Junction, CO 81507

Entire Report Reviewed By:



Chris Ward  
Project Manager

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# SAMPLE SUMMARY

## 20220513-FED\_1-30-BGN (1205) L1494266-01 Solid

Collected by  
Alex Slorby

Collected date/time  
05/13/22 12:05

Received date/time  
05/14/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1866951	1	05/23/22 18:44	05/23/22 18:44	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1867789	1	05/23/22 03:24	05/23/22 11:59	SCM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1866926	1	05/20/22 13:20	05/20/22 13:25	EPW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1867394	1	05/21/22 09:52	05/22/22 12:27	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1867053	1	05/22/22 17:28	05/23/22 00:00	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1866967	1	05/22/22 17:20	05/24/22 11:40	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1867058	5	05/22/22 17:31	05/22/22 20:46	LD	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

## 20220513-FED\_1-30-BGN (1215) L1494266-02 Solid

Collected by  
Alex Slorby

Collected date/time  
05/13/22 12:15

Received date/time  
05/14/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1866951	1	05/23/22 18:46	05/23/22 18:46	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1867789	1	05/23/22 03:24	05/23/22 12:04	SCM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1866926	1	05/20/22 13:20	05/20/22 13:25	EPW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1867394	1	05/21/22 09:52	05/22/22 12:27	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1867053	1	05/22/22 17:28	05/23/22 00:14	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1866967	1	05/22/22 17:20	05/24/22 11:49	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1867058	5	05/22/22 17:31	05/22/22 21:03	LD	Mt. Juliet, TN

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

## 20220513-FED\_1-30-BGN (1220) L1494266-03 Solid

Collected by  
Alex Slorby

Collected date/time  
05/13/22 12:20

Received date/time  
05/14/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1866951	1	05/23/22 18:49	05/23/22 18:49	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1867789	1	05/23/22 03:24	05/23/22 12:15	SCM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1866926	1	05/20/22 13:20	05/20/22 13:25	EPW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1867394	1	05/21/22 09:52	05/22/22 12:27	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1867053	1	05/22/22 17:28	05/23/22 00:17	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1866967	1	05/22/22 17:20	05/24/22 11:52	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1867058	5	05/22/22 17:31	05/22/22 21:06	LD	Mt. Juliet, TN

## 20220513-FED\_1-30-BGN (1235) L1494266-04 Solid

Collected by  
Alex Slorby

Collected date/time  
05/13/22 12:35

Received date/time  
05/14/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1866951	1	05/24/22 13:49	05/24/22 13:49	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1867789	1	05/23/22 03:24	05/23/22 12:20	SCM	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1866926	1	05/20/22 13:20	05/20/22 13:25	EPW	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1867394	1	05/21/22 09:52	05/22/22 12:27	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1867053	1	05/22/22 17:28	05/23/22 00:19	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1866967	1	05/22/22 17:20	05/24/22 11:55	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1867058	5	05/22/22 17:31	05/22/22 21:10	LD	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



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.378		1	05/23/2022 18:44	WG1866951

## 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	05/23/2022 11:59	<a href="#">WG1867789</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.13	<a href="#">T8</a>	1	05/20/2022 13:25	<a href="#">WG1866926</a>

## Sample Narrative:

L1494266-01 WG1866926: 8.13 at 22.9C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	120		10.0	1	05/22/2022 12:27	<a href="#">WG1867394</a>

## Sample Narrative:

L1494266-01 WG1867394: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	28.2		0.0852	0.500	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Cadmium	0.582		0.0471	0.500	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Copper	41.3		0.400	2.00	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Lead	20.5	<a href="#">O1</a>	0.208	0.500	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Nickel	24.1	<a href="#">O1</a>	0.132	2.00	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Selenium	U	<a href="#">J3 J6</a>	0.764	2.00	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Silver	U	<a href="#">O1</a>	0.127	1.00	1	05/23/2022 00:00	<a href="#">WG1867053</a>
Zinc	91.6	<a href="#">J6</a>	0.832	5.00	1	05/23/2022 00:00	<a href="#">WG1867053</a>

## 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	0.316		0.0167	0.200	1	05/24/2022 11:40	<a href="#">WG1866967</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.47	<a href="#">O1</a>	0.100	1.00	5	05/22/2022 20:46	<a href="#">WG1867058</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.38		1	05/23/2022 18:46	WG1866951

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.414	<a href="#">J P1</a>	0.255	1.00	1	05/23/2022 12:04	<a href="#">WG1867789</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.25	<a href="#">T8</a>	1	05/20/2022 13:25	<a href="#">WG1866926</a>

## Sample Narrative:

L1494266-02 WG1866926: 8.25 at 22.8C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	59.2		10.0	1	05/22/2022 12:27	<a href="#">WG1867394</a>

## Sample Narrative:

L1494266-02 WG1867394: at 25C

## Metals (ICP) by Method 6010B

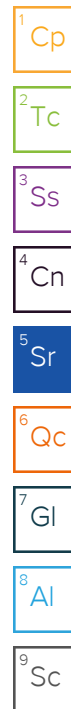
Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	18.2		0.0852	0.500	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Cadmium	0.131	<a href="#">J</a>	0.0471	0.500	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Copper	46.9		0.400	2.00	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Lead	21.2		0.208	0.500	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Nickel	13.1		0.132	2.00	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Selenium	U		0.764	2.00	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Silver	U		0.127	1.00	1	05/23/2022 00:14	<a href="#">WG1867053</a>
Zinc	56.3		0.832	5.00	1	05/23/2022 00:14	<a href="#">WG1867053</a>

## 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	0.502		0.0167	0.200	1	05/24/2022 11:49	<a href="#">WG1866967</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	0.843	<a href="#">J</a>	0.100	1.00	5	05/22/2022 21:03	<a href="#">WG1867058</a>



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.306		1	05/23/2022 18:49	WG1866951

## Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.344	J	0.255	1.00	1	05/23/2022 12:15	<a href="#">WG1867789</a>

## Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.52	T8	1	05/20/2022 13:25	<a href="#">WG1866926</a>

## Sample Narrative:

L1494266-03 WG1866926: 8.52 at 22.9C

## Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	136		10.0	1	05/22/2022 12:27	<a href="#">WG1867394</a>

## Sample Narrative:

L1494266-03 WG1867394: at 25C

## Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	38.1		0.0852	0.500	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Cadmium	0.344	J	0.0471	0.500	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Copper	33.6		0.400	2.00	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Lead	18.2		0.208	0.500	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Nickel	18.0		0.132	2.00	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Selenium	U		0.764	2.00	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Silver	U		0.127	1.00	1	05/23/2022 00:17	<a href="#">WG1867053</a>
Zinc	74.3		0.832	5.00	1	05/23/2022 00:17	<a href="#">WG1867053</a>

## 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	0.283		0.0167	0.200	1	05/24/2022 11:52	<a href="#">WG1866967</a>

## Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.52		0.100	1.00	5	05/22/2022 21:06	<a href="#">WG1867058</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2030		1	05/24/2022 13:49	WG1866951

1  
Cp

2  
Tc

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.298	J	0.255	1.00	1	05/23/2022 12:20	<a href="#">WG1867789</a>

3  
Ss

4  
Cn

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	10.1	T8	1	05/20/2022 13:25	<a href="#">WG1866926</a>

5  
Sr

6  
Qc

Sample Narrative:

L1494266-04 WG1866926: 10.1 at 22.8C

7  
Gl

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	20200		10.0	1	05/22/2022 12:27	<a href="#">WG1867394</a>

8  
Al

9  
Sc

Sample Narrative:

L1494266-04 WG1867394: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	36.1		0.0852	0.500	1	05/23/2022 00:19	<a href="#">WG1867053</a>
Cadmium	0.292	J	0.0471	0.500	1	05/23/2022 00:19	<a href="#">WG1867053</a>
Copper	23.0		0.400	2.00	1	05/23/2022 00:19	<a href="#">WG1867053</a>
Lead	12.5		0.208	0.500	1	05/23/2022 00:19	<a href="#">WG1867053</a>
Nickel	12.9		0.132	2.00	1	05/23/2022 00:19	<a href="#">WG1867053</a>
Selenium	U		0.764	2.00	1	05/23/2022 00:19	<a href="#">WG1867053</a>
Silver	U		0.127	1.00	1	05/23/2022 00:19	<a href="#">WG1867053</a>
Zinc	54.6		0.832	5.00	1	05/23/2022 00:19	<a href="#">WG1867053</a>

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	6.29		0.0167	0.200	1	05/24/2022 11:55	<a href="#">WG1866967</a>

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	6.76		0.100	1.00	5	05/22/2022 21:10	<a href="#">WG1867058</a>



Method Blank (MB)

(MB) R3795014-1 05/23/22 10:44

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

L1494266-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1494266-02 05/23/22 12:04 • (DUP) R3795014-3 05/23/22 12:10

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Hexavalent Chromium	0.414	0.306	1	30.0	J P1	20

L1495823-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1495823-02 05/23/22 13:22 • (DUP) R3795014-8 05/23/22 13:27

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

Laboratory Control Sample (LCS)

(LCS) R3795014-2 05/23/22 10:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	9.56	95.6	80.0-120	

L1495416-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1495416-01 05/23/22 12:36 • (MS) R3795014-4 05/23/22 12:51 • (MSD) R3795014-5 05/23/22 12:56

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Hexavalent Chromium	20.0	0.444	15.4	17.4	74.9	85.0	1	75.0-125	J6		12.3	20

L1495416-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1495416-01 05/23/22 12:36 • (MS) R3795014-6 05/23/22 13:02

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	685	0.444	617	90.0	50	75.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1494261-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1494261-21 05/20/22 13:25 • (DUP) R3794440-2 05/20/22 13:25

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	pH	su		%		%
pH	8.83	8.82	1	0.113		1

Sample Narrative:  
OS: 8.83 at 23.4C  
DUP: 8.82 at 23.6C

L1494266-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1494266-01 05/20/22 13:25 • (DUP) R3794440-3 05/20/22 13:25

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.13	8.09	1	0.493		1

Sample Narrative:  
OS: 8.13 at 22.9C  
DUP: 8.09 at 23C

Laboratory Control Sample (LCS)

(LCS) R3794440-1 05/20/22 13:25

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	9.93	99.3	99.0-101	

Sample Narrative:  
LCS: 9.93 at 23.3C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3794617-1 05/22/22 12:27

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

L1494261-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1494261-21 05/22/22 12:27 • (DUP) R3794617-3 05/22/22 12:27

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	3470	3810	1	9.34		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1494266-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1494266-01 05/22/22 12:27 • (DUP) R3794617-4 05/22/22 12:27

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	120	111	1	8.33		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3794617-2 05/22/22 12:27

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	279	104	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) R3794756-1 05/22/22 23:54

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

Laboratory Control Sample (LCS)

(LCS) R3794756-2 05/22/22 23:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	84.2	84.2	80.0-120	
Cadmium	100	80.9	80.9	80.0-120	
Copper	100	81.9	81.9	80.0-120	
Lead	100	81.4	81.4	80.0-120	
Nickel	100	82.3	82.3	80.0-120	
Selenium	100	81.7	81.7	80.0-120	
Silver	20.0	16.1	80.7	80.0-120	
Zinc	100	81.0	81.0	80.0-120	

L1494266-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1494266-01 05/23/22 00:00 • (MS) R3794756-5 05/23/22 00:08 • (MSD) R3794756-6 05/23/22 00:11

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 %
Barium	100	28.2	113	116	84.8	87.4	1	75.0-125			2.28	20
Cadmium	100	0.582	87.6	86.3	87.0	85.7	1	75.0-125			1.50	20
Copper	100	41.3	124	134	82.7	92.6	1	75.0-125			7.69	20
Lead	100	20.5	111	112	90.2	91.0	1	75.0-125			0.792	20
Nickel	100	24.1	116	117	91.4	93.3	1	75.0-125			1.66	20
Selenium	100	U	67.0	82.2	67.0	82.2	1	75.0-125	J6	J3	20.3	20
Silver	20.0	U	17.6	17.3	88.0	86.4	1	75.0-125			1.85	20
Zinc	100	91.6	159	177	67.5	85.8	1	75.0-125	J6		10.9	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3795575-1 05/24/22 11:15

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) R3795575-2 05/24/22 11:17 • (LCSD) R3795575-3 05/24/22 11:20

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	1.02	1.01	102	101	80.0-120			0.513	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) R3794688-1 05/22/22 20:40

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Arsenic	U		0.100	1.00

Laboratory Control Sample (LCS)

(LCS) R3794688-2 05/22/22 20:43

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	mg/kg	mg/kg	%	%	
Arsenic	100	80.1	80.1	80.0-120	

L1494266-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1494266-01 05/22/22 20:46 • (MS) R3794688-5 05/22/22 20:56 • (MSD) R3794688-6 05/22/22 21:00

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Arsenic	100	1.47	85.1	82.7	83.7	81.3	5	75.0-125			2.85	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

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

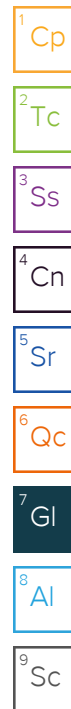
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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
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.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
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

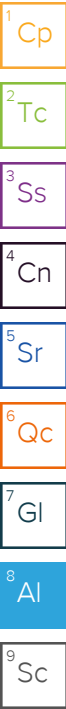
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <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.





4 PM: