

April 25, 2023

Revised Report

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

**Caerus Oil and Gas**

Sample Delivery Group: L1574963

Samples Received: 01/11/2023

Project Number:

Description: 909J

Report To: Brett M. , Jake J. , Blair R.  
143 Diamond Avenue  
Parachute, CO 81635

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.

**Pace Analytical National**12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 [www.pacenational.com](http://www.pacenational.com)

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<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

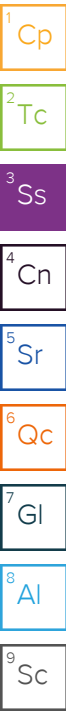
<sup>9</sup> Sc

# SAMPLE SUMMARY

## RA1-07164-WMFK L1574963-01 GW

Collected by: Will Harmon  
 Collected date/time: 01/10/23 11:30  
 Received date/time: 01/11/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2044211	1	04/19/23 06:10	04/19/23 09:22	MMF	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 D-2015	WG1987255	1	01/11/23 23:31	01/12/23 01:12	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1988085	1	01/16/23 16:00	01/16/23 16:00	ARD	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1986833	1	01/17/23 12:00	01/17/23 12:00	CAT	Mt. Juliet, TN
Wet Chemistry by Method 365.4	WG1989400	1	01/13/23 14:42	01/16/23 12:45	CAT	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1988623	1	01/13/23 22:27	01/13/23 22:27	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050A	WG1987593	1	01/13/23 16:40	01/13/23 16:40	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1986928	10	01/11/23 23:11	01/11/23 23:11	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1986928	100	01/11/23 23:27	01/11/23 23:27	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1987378	1	01/12/23 12:00	01/12/23 17:12	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1987378	10	01/12/23 12:00	01/12/23 20:22	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1987840	500	01/13/23 01:22	01/13/23 01:22	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1987170	100	01/12/23 02:59	01/12/23 02:59	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1987785	500	01/12/23 18:51	01/12/23 18:51	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1986631	1	01/11/23 17:54	01/12/23 16:03	DMG	Mt. Juliet, TN



## RI1-07245-WMFK L1574963-02 GW

Collected by: Will Harmon  
 Collected date/time: 01/10/23 10:40  
 Received date/time: 01/11/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2044211	1	04/19/23 06:10	04/19/23 09:22	MMF	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 D-2015	WG1987255	1	01/11/23 23:31	01/12/23 01:12	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1988085	1	01/16/23 16:04	01/16/23 16:04	ARD	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1986833	1	01/17/23 12:01	01/17/23 12:01	CAT	Mt. Juliet, TN
Wet Chemistry by Method 365.4	WG1989400	1	01/13/23 14:42	01/16/23 12:46	CAT	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1988623	1	01/13/23 22:27	01/13/23 22:27	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050A	WG1987593	1	01/13/23 16:40	01/13/23 16:40	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1986928	10	01/11/23 23:43	01/11/23 23:43	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1986928	100	01/11/23 23:59	01/11/23 23:59	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1987378	1	01/12/23 12:00	01/12/23 17:26	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1987378	10	01/12/23 12:00	01/12/23 20:25	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1987840	500	01/13/23 01:44	01/13/23 01:44	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1987170	250	01/12/23 03:19	01/12/23 03:19	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1986631	1	01/11/23 17:54	01/12/23 16:23	DMG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1986631	5	01/11/23 17:54	01/12/23 21:53	DMG	Mt. Juliet, TN

## K8W-10908-ILES L1574963-03 GW

Collected by: Will Harmon  
 Collected date/time: 01/10/23 08:40  
 Received date/time: 01/11/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2044211	1	04/19/23 06:10	04/19/23 09:22	MMF	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 D-2015	WG1987255	1	01/11/23 23:31	01/12/23 01:12	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1988085	1	01/16/23 16:08	01/16/23 16:08	ARD	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1986833	1	01/17/23 12:02	01/17/23 12:02	CAT	Mt. Juliet, TN
Wet Chemistry by Method 365.4	WG1989400	1	01/13/23 14:42	01/16/23 12:47	CAT	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1988623	1	01/13/23 22:27	01/13/23 22:27	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050A	WG1987593	1	01/13/23 16:40	01/13/23 16:40	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1986928	10	01/12/23 00:15	01/12/23 00:15	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1986928	100	01/12/23 00:31	01/12/23 00:31	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1987378	1	01/12/23 12:00	01/12/23 17:29	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1987378	10	01/12/23 12:00	01/12/23 20:28	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1989504	100	01/16/23 21:56	01/16/23 21:56	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1987170	1000	01/12/23 03:38	01/12/23 03:38	JAH	Mt. Juliet, TN

# SAMPLE SUMMARY

## K8W-10908-ILES L1574963-03 GW

Collected by: Will Harmon  
 Collected date/time: 01/10/23 08:40  
 Received date/time: 01/11/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1986631	20	01/11/23 17:54	01/13/23 10:25	MAA	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1986631	5	01/11/23 17:54	01/12/23 22:32	DMG	Mt. Juliet, TN

## K8W-19147-WMFK L1574963-04 GW

Collected by: Will Harmon  
 Collected date/time: 01/10/23 09:40  
 Received date/time: 01/11/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2044211	1	04/19/23 06:10	04/19/23 09:22	MMF	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 D-2015	WG1987255	1	01/11/23 23:31	01/12/23 01:12	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1988085	1	01/16/23 16:13	01/16/23 16:13	ARD	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1986833	1	01/17/23 12:04	01/17/23 12:04	CAT	Mt. Juliet, TN
Wet Chemistry by Method 365.4	WG1989400	1	01/13/23 14:42	01/16/23 12:49	CAT	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1988623	1	01/13/23 22:27	01/13/23 22:27	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050A	WG1987593	1	01/13/23 16:40	01/13/23 16:40	NTG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1986928	10	01/12/23 00:47	01/12/23 00:47	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1986928	100	01/12/23 01:35	01/12/23 01:35	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1987378	1	01/12/23 12:00	01/12/23 17:32	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1987378	10	01/12/23 12:00	01/12/23 20:30	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1987840	1000	01/13/23 02:06	01/13/23 02:06	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1987170	250	01/12/23 03:57	01/12/23 03:57	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1986631	20	01/11/23 17:54	01/12/23 22:52	DMG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

# CASE NARRATIVE

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



Chris Ward  
Project Manager

- <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

## Report Revision History

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Level II Report - Version 1: 01/17/23 15:15

## Project Narrative

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Added TDS

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	11900	<u>J3 Q</u>	400	1	04/19/2023 09:22	<a href="#">WG2044211</a>

Gravimetric Analysis by Method 2540 D-2015

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Suspended Solids	197		25.0	1	01/12/2023 01:12	<a href="#">WG1987255</a>

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	900		8.45	20.0	1	01/16/2023 16:00	<a href="#">WG1988085</a>
Alkalinity,Bicarbonate	900		8.45	20.0	1	01/16/2023 16:00	<a href="#">WG1988085</a>
Alkalinity,Carbonate	U		8.45	20.0	1	01/16/2023 16:00	<a href="#">WG1988085</a>

Sample Narrative:

L1574963-01 WG1988085: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	U		0.0500	0.100	1	01/17/2023 12:00	<a href="#">WG1986833</a>

Wet Chemistry by Method 365.4

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Phosphorus>Total	0.433	<u>B</u>	0.0350	0.100	1	01/16/2023 12:45	<a href="#">WG1989400</a>

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	6.81	<u>T8</u>	1	01/13/2023 22:27	<a href="#">WG1988623</a>

Sample Narrative:

L1574963-01 WG1988623: 6.81 at 22.4C

Wet Chemistry by Method 9050A

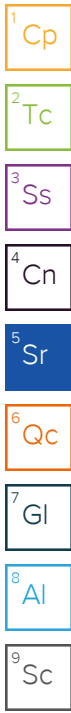
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	21900		10.0	1	01/13/2023 16:40	<a href="#">WG1987593</a>

Sample Narrative:

L1574963-01 WG1987593: at 25C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Bromide	54.4		3.53	10.0	10	01/11/2023 23:11	<a href="#">WG1986928</a>
Chloride	6950		37.9	100	100	01/11/2023 23:27	<a href="#">WG1986928</a>
Fluoride	U		0.640	1.50	10	01/11/2023 23:11	<a href="#">WG1986928</a>
Nitrate as (N)	U		0.480	1.00	10	01/11/2023 23:11	<a href="#">WG1986928</a>
Nitrite as (N)	U		0.420	1.00	10	01/11/2023 23:11	<a href="#">WG1986928</a>
Sulfate	U		5.94	50.0	10	01/11/2023 23:11	<a href="#">WG1986928</a>



## Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
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## Sample Narrative:

L1574963-01 WG1986928: Dilution due to matrix.

## Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	72.2		0.00736	0.0500	10	01/12/2023 20:22	<a href="#">WG1987378</a>
Boron	3.72		0.0200	0.200	1	01/12/2023 17:12	<a href="#">WG1987378</a>
Calcium	384	V	0.0793	1.00	1	01/12/2023 17:12	<a href="#">WG1987378</a>
Iron	128	V	0.0180	0.100	1	01/12/2023 17:12	<a href="#">WG1987378</a>
Magnesium	16.0		0.0853	1.00	1	01/12/2023 17:12	<a href="#">WG1987378</a>
Manganese	1.71		0.000934	0.0100	1	01/12/2023 17:12	<a href="#">WG1987378</a>
Potassium	118	O1	0.261	2.00	1	01/12/2023 17:12	<a href="#">WG1987378</a>
Selenium	0.0116		0.00735	0.0100	1	01/12/2023 17:12	<a href="#">WG1987378</a>
Sodium	4240		5.04	30.0	10	01/12/2023 20:22	<a href="#">WG1987378</a>
Strontium	58.8		0.00640	0.100	10	01/12/2023 20:22	<a href="#">WG1987378</a>

## Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	120		15.7	50.0	500	01/13/2023 01:22	<a href="#">WG1987840</a>
(S) a,a,a-Trifluorotoluene(FID)	99.3			78.0-120		01/13/2023 01:22	<a href="#">WG1987840</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	11.2		0.00941	0.100	100	01/12/2023 02:59	<a href="#">WG1987170</a>
Toluene	29.5		0.139	0.500	500	01/12/2023 18:51	<a href="#">WG1987785</a>
Ethylbenzene	1.04		0.0137	0.100	100	01/12/2023 02:59	<a href="#">WG1987170</a>
Xylenes, Total	13.7		0.0174	0.300	100	01/12/2023 02:59	<a href="#">WG1987170</a>
Naphthalene	U		0.100	0.500	100	01/12/2023 02:59	<a href="#">WG1987170</a>
(S) Toluene-d8	119			80.0-120		01/12/2023 02:59	<a href="#">WG1987170</a>
(S) Toluene-d8	104			80.0-120		01/12/2023 18:51	<a href="#">WG1987785</a>
(S) 4-Bromofluorobenzene	109			77.0-126		01/12/2023 02:59	<a href="#">WG1987170</a>
(S) 4-Bromofluorobenzene	92.4			77.0-126		01/12/2023 18:51	<a href="#">WG1987785</a>
(S) 1,2-Dichloroethane-d4	94.3			70.0-130		01/12/2023 02:59	<a href="#">WG1987170</a>
(S) 1,2-Dichloroethane-d4	96.9			70.0-130		01/12/2023 18:51	<a href="#">WG1987785</a>

## Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	7.93		0.0222	0.100	1	01/12/2023 16:03	<a href="#">WG1986631</a>
C28-C36 Motor Oil Range	U		0.0118	0.100	1	01/12/2023 16:03	<a href="#">WG1986631</a>
(S) o-Terphenyl	27.8	J2		52.0-156		01/12/2023 16:03	<a href="#">WG1986631</a>

## Sample Narrative:

L1574963-01 WG1986631: Sample produced emulsion during Extraction process, low surr/spike recoveries due to matrix.

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	16100	<u>Q</u>	400	1	04/19/2023 09:22	<a href="#">WG2044211</a>

Gravimetric Analysis by Method 2540 D-2015

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Suspended Solids	190		50.0	1	01/12/2023 01:12	<a href="#">WG1987255</a>

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	389		8.45	20.0	1	01/16/2023 16:04	<a href="#">WG1988085</a>
Alkalinity,Bicarbonate	389		8.45	20.0	1	01/16/2023 16:04	<a href="#">WG1988085</a>
Alkalinity,Carbonate	U		8.45	20.0	1	01/16/2023 16:04	<a href="#">WG1988085</a>

Sample Narrative:

L1574963-02 WG1988085: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	U		0.0500	0.100	1	01/17/2023 12:01	<a href="#">WG1986833</a>

Wet Chemistry by Method 365.4

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Phosphorus>Total	2.56		0.0350	0.100	1	01/16/2023 12:46	<a href="#">WG1989400</a>

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	6.45	<u>T8</u>	1	01/13/2023 22:27	<a href="#">WG1988623</a>

Sample Narrative:

L1574963-02 WG1988623: 6.45 at 18C

Wet Chemistry by Method 9050A

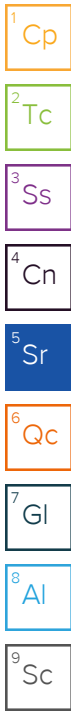
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	29300		10.0	1	01/13/2023 16:40	<a href="#">WG1987593</a>

Sample Narrative:

L1574963-02 WG1987593: at 25C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Bromide	88.5		3.53	10.0	10	01/11/2023 23:43	<a href="#">WG1986928</a>
Chloride	10300		37.9	100	100	01/11/2023 23:59	<a href="#">WG1986928</a>
Fluoride	U		0.640	1.50	10	01/11/2023 23:43	<a href="#">WG1986928</a>
Nitrate as (N)	U		0.480	1.00	10	01/11/2023 23:43	<a href="#">WG1986928</a>
Nitrite as (N)	U		0.420	1.00	10	01/11/2023 23:43	<a href="#">WG1986928</a>
Sulfate	U		5.94	50.0	10	01/11/2023 23:43	<a href="#">WG1986928</a>



Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
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Sample Narrative:

L1574963-02 WG1986928: Dilution due to matrix.

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	95.4		0.00736	0.0500	10	01/12/2023 20:25	<a href="#">WG1987378</a>
Boron	1.47		0.0200	0.200	1	01/12/2023 17:26	<a href="#">WG1987378</a>
Calcium	765		0.0793	1.00	1	01/12/2023 17:26	<a href="#">WG1987378</a>
Iron	174		0.0180	0.100	1	01/12/2023 17:26	<a href="#">WG1987378</a>
Magnesium	19.6		0.0853	1.00	1	01/12/2023 17:26	<a href="#">WG1987378</a>
Manganese	2.37		0.000934	0.0100	1	01/12/2023 17:26	<a href="#">WG1987378</a>
Potassium	80.6		0.261	2.00	1	01/12/2023 17:26	<a href="#">WG1987378</a>
Selenium	U		0.00735	0.0100	1	01/12/2023 17:26	<a href="#">WG1987378</a>
Sodium	5460		5.04	30.0	10	01/12/2023 20:25	<a href="#">WG1987378</a>
Strontium	103		0.00640	0.100	10	01/12/2023 20:25	<a href="#">WG1987378</a>

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	142		15.7	50.0	500	01/13/2023 01:44	<a href="#">WG1987840</a>
(S) a,a,a-Trifluorotoluene(FID)	99.3			78.0-120		01/13/2023 01:44	<a href="#">WG1987840</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	13.8		0.0235	0.250	250	01/12/2023 03:19	<a href="#">WG1987170</a>
Toluene	46.2		0.0695	0.250	250	01/12/2023 03:19	<a href="#">WG1987170</a>
Ethylbenzene	1.30		0.0343	0.250	250	01/12/2023 03:19	<a href="#">WG1987170</a>
Xylenes, Total	18.9		0.0435	0.750	250	01/12/2023 03:19	<a href="#">WG1987170</a>
Naphthalene	U		0.250	1.25	250	01/12/2023 03:19	<a href="#">WG1987170</a>
(S) Toluene-d8	115			80.0-120		01/12/2023 03:19	<a href="#">WG1987170</a>
(S) 4-Bromofluorobenzene	107			77.0-126		01/12/2023 03:19	<a href="#">WG1987170</a>
(S) 1,2-Dichloroethane-d4	95.6			70.0-130		01/12/2023 03:19	<a href="#">WG1987170</a>

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	10.2		0.111	0.500	5	01/12/2023 21:53	<a href="#">WG1986631</a>
C28-C36 Motor Oil Range	0.0327	J	0.0118	0.100	1	01/12/2023 16:23	<a href="#">WG1986631</a>
(S) o-Terphenyl	20.9	J2		52.0-156		01/12/2023 16:23	<a href="#">WG1986631</a>
(S) o-Terphenyl	94.0			52.0-156		01/12/2023 21:53	<a href="#">WG1986631</a>

Sample Narrative:

L1574963-02 WG1986631: Sample produced emulsion during Extraction process, low surr/spike recoveries due to matrix.

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	10900	<u>Q</u>	400	1	04/19/2023 09:22	<a href="#">WG2044211</a>

Gravimetric Analysis by Method 2540 D-2015

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Suspended Solids	118	<u>J3</u>	10.0	1	01/12/2023 01:12	<a href="#">WG1987255</a>

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	766		8.45	20.0	1	01/16/2023 16:08	<a href="#">WG1988085</a>
Alkalinity,Bicarbonate	766		8.45	20.0	1	01/16/2023 16:08	<a href="#">WG1988085</a>
Alkalinity,Carbonate	U		8.45	20.0	1	01/16/2023 16:08	<a href="#">WG1988085</a>

Sample Narrative:

L1574963-03 WG1988085: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	U		0.0500	0.100	1	01/17/2023 12:02	<a href="#">WG1986833</a>

Wet Chemistry by Method 365.4

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Phosphorus>Total	0.0784	<u>B J</u>	0.0350	0.100	1	01/16/2023 12:47	<a href="#">WG1989400</a>

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	6.72	<u>T8</u>	1	01/13/2023 22:27	<a href="#">WG1988623</a>

Sample Narrative:

L1574963-03 WG1988623: 6.72 at 18C

Wet Chemistry by Method 9050A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	21400		10.0	1	01/13/2023 16:40	<a href="#">WG1987593</a>

Sample Narrative:

L1574963-03 WG1987593: at 25C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Bromide	60.6		3.53	10.0	10	01/12/2023 00:15	<a href="#">WG1986928</a>
Chloride	6760		37.9	100	100	01/12/2023 00:31	<a href="#">WG1986928</a>
Fluoride	0.661	<u>J</u>	0.640	1.50	10	01/12/2023 00:15	<a href="#">WG1986928</a>
Nitrate as (N)	U		0.480	1.00	10	01/12/2023 00:15	<a href="#">WG1986928</a>
Nitrite as (N)	U		0.420	1.00	10	01/12/2023 00:15	<a href="#">WG1986928</a>
Sulfate	6.85	<u>J</u>	5.94	50.0	10	01/12/2023 00:15	<a href="#">WG1986928</a>



Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
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Sample Narrative:

L1574963-03 WG1986928: Dilution due to matrix.

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	30.6		0.000736	0.00500	1	01/12/2023 17:29	<a href="#">WG1987378</a>
Boron	16.8		0.0200	0.200	1	01/12/2023 17:29	<a href="#">WG1987378</a>
Calcium	85.8		0.0793	1.00	1	01/12/2023 17:29	<a href="#">WG1987378</a>
Iron	64.3		0.0180	0.100	1	01/12/2023 17:29	<a href="#">WG1987378</a>
Magnesium	6.74		0.0853	1.00	1	01/12/2023 17:29	<a href="#">WG1987378</a>
Manganese	0.699		0.000934	0.0100	1	01/12/2023 17:29	<a href="#">WG1987378</a>
Potassium	52.0		0.261	2.00	1	01/12/2023 17:29	<a href="#">WG1987378</a>
Selenium	U		0.00735	0.0100	1	01/12/2023 17:29	<a href="#">WG1987378</a>
Sodium	4350		5.04	30.0	10	01/12/2023 20:28	<a href="#">WG1987378</a>
Strontium	26.7		0.00640	0.100	10	01/12/2023 20:28	<a href="#">WG1987378</a>

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	157		3.14	10.0	100	01/16/2023 21:56	<a href="#">WG1989504</a>
(S) a,a,a-Trifluorotoluene(FID)	97.5			78.0-120		01/16/2023 21:56	<a href="#">WG1989504</a>

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

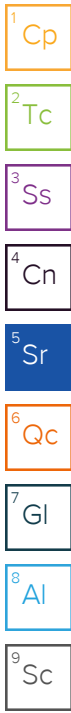
Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	9.24		0.0941	1.00	1000	01/12/2023 03:38	<a href="#">WG1987170</a>
Toluene	35.4		0.278	1.00	1000	01/12/2023 03:38	<a href="#">WG1987170</a>
Ethylbenzene	1.22		0.137	1.00	1000	01/12/2023 03:38	<a href="#">WG1987170</a>
Xylenes, Total	17.8		0.174	3.00	1000	01/12/2023 03:38	<a href="#">WG1987170</a>
Naphthalene	U		1.00	5.00	1000	01/12/2023 03:38	<a href="#">WG1987170</a>
(S) Toluene-d8	115			80.0-120		01/12/2023 03:38	<a href="#">WG1987170</a>
(S) 4-Bromofluorobenzene	107			77.0-126		01/12/2023 03:38	<a href="#">WG1987170</a>
(S) 1,2-Dichloroethane-d4	99.1			70.0-130		01/12/2023 03:38	<a href="#">WG1987170</a>

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	71.3		0.444	2.00	20	01/13/2023 10:25	<a href="#">WG1986631</a>
C28-C36 Motor Oil Range	4.74		0.0590	0.500	5	01/12/2023 22:32	<a href="#">WG1986631</a>
(S) o-Terphenyl	0.000	J7		52.0-156		01/13/2023 10:25	<a href="#">WG1986631</a>
(S) o-Terphenyl	0.000	J2		52.0-156		01/12/2023 22:32	<a href="#">WG1986631</a>

Sample Narrative:

L1574963-03 WG1986631: Surrogate failure due to matrix interference



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	8320	<u>Q</u>	400	1	04/19/2023 09:22	<a href="#">WG2044211</a>

Gravimetric Analysis by Method 2540 D-2015

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Suspended Solids	42.8		10.0	1	01/12/2023 01:12	<a href="#">WG1987255</a>

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	1040		8.45	20.0	1	01/16/2023 16:13	<a href="#">WG1988085</a>
Alkalinity,Bicarbonate	1040		8.45	20.0	1	01/16/2023 16:13	<a href="#">WG1988085</a>
Alkalinity,Carbonate	U		8.45	20.0	1	01/16/2023 16:13	<a href="#">WG1988085</a>

Sample Narrative:

L1574963-04 WG1988085: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	U		0.0500	0.100	1	01/17/2023 12:04	<a href="#">WG1986833</a>

Wet Chemistry by Method 365.4

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Phosphorus,Total	0.109	<u>B</u>	0.0350	0.100	1	01/16/2023 12:49	<a href="#">WG1989400</a>

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.02	<u>T8</u>	1	01/13/2023 22:27	<a href="#">WG1988623</a>

Sample Narrative:

L1574963-04 WG1988623: 7.02 at 18.1C

Wet Chemistry by Method 9050A

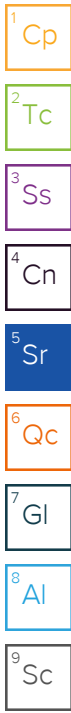
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	15000		10.0	1	01/13/2023 16:40	<a href="#">WG1987593</a>

Sample Narrative:

L1574963-04 WG1987593: at 25C

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Bromide	37.2		3.53	10.0	10	01/12/2023 00:47	<a href="#">WG1986928</a>
Chloride	4230		37.9	100	100	01/12/2023 01:35	<a href="#">WG1986928</a>
Fluoride	1.16	<u>J</u>	0.640	1.50	10	01/12/2023 00:47	<a href="#">WG1986928</a>
Nitrate as (N)	U		0.480	1.00	10	01/12/2023 00:47	<a href="#">WG1986928</a>
Nitrite as (N)	U		0.420	1.00	10	01/12/2023 00:47	<a href="#">WG1986928</a>
Sulfate	9.00	<u>J</u>	5.94	50.0	10	01/12/2023 00:47	<a href="#">WG1986928</a>



Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
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Sample Narrative:

L1574963-04 WG1986928: Dilution due to matrix.

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Barium	27.5		0.000736	0.00500	1	01/12/2023 17:32	<a href="#">WG1987378</a>
Boron	5.13		0.0200	0.200	1	01/12/2023 17:32	<a href="#">WG1987378</a>
Calcium	58.8		0.0793	1.00	1	01/12/2023 17:32	<a href="#">WG1987378</a>
Iron	13.7		0.0180	0.100	1	01/12/2023 17:32	<a href="#">WG1987378</a>
Magnesium	5.62		0.0853	1.00	1	01/12/2023 17:32	<a href="#">WG1987378</a>
Manganese	0.168		0.000934	0.0100	1	01/12/2023 17:32	<a href="#">WG1987378</a>
Potassium	27.5		0.261	2.00	1	01/12/2023 17:32	<a href="#">WG1987378</a>
Selenium	U		0.00735	0.0100	1	01/12/2023 17:32	<a href="#">WG1987378</a>
Sodium	3080		5.04	30.0	10	01/12/2023 20:30	<a href="#">WG1987378</a>
Strontium	14.2		0.000640	0.0100	1	01/12/2023 17:32	<a href="#">WG1987378</a>

Volatile Organic Compounds (GC) by Method 8015D/GRO

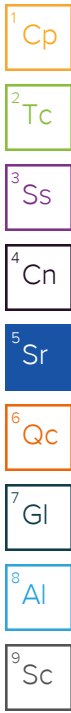
Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	141		31.4	100	1000	01/13/2023 02:06	<a href="#">WG1987840</a>
(S) a,a,a-Trifluorotoluene(FID)	99.6			78.0-120		01/13/2023 02:06	<a href="#">WG1987840</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	11.7		0.0235	0.250	250	01/12/2023 03:57	<a href="#">WG1987170</a>
Toluene	37.9		0.0695	0.250	250	01/12/2023 03:57	<a href="#">WG1987170</a>
Ethylbenzene	1.39		0.0343	0.250	250	01/12/2023 03:57	<a href="#">WG1987170</a>
Xylenes, Total	18.6		0.0435	0.750	250	01/12/2023 03:57	<a href="#">WG1987170</a>
Naphthalene	U		0.250	1.25	250	01/12/2023 03:57	<a href="#">WG1987170</a>
(S) Toluene-d8	115			80.0-120		01/12/2023 03:57	<a href="#">WG1987170</a>
(S) 4-Bromofluorobenzene	107			77.0-126		01/12/2023 03:57	<a href="#">WG1987170</a>
(S) 1,2-Dichloroethane-d4	98.3			70.0-130		01/12/2023 03:57	<a href="#">WG1987170</a>

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	129		0.444	2.00	20	01/12/2023 22:52	<a href="#">WG1986631</a>
C28-C36 Motor Oil Range	9.94		0.236	2.00	20	01/12/2023 22:52	<a href="#">WG1986631</a>
(S) o-Terphenyl	0.000	J7		52.0-156		01/12/2023 22:52	<a href="#">WG1986631</a>



Method Blank (MB)

(MB) R3915585-1 04/19/23 09:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U		10.0	10.0

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

L1557514-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1557514-01 04/19/23 09:22 • (DUP) R3915585-3 04/19/23 09:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	9760	10300	1	5.58	J3	5

<sup>4</sup>Cn

<sup>5</sup>Sr

L1574963-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1574963-01 04/19/23 09:22 • (DUP) R3915585-4 04/19/23 09:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	11900	13500	1	12.3	J3	5

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

Laboratory Control Sample (LCS)

(LCS) R3915585-2 04/19/23 09:22

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800	7720	87.7	77.3-123	

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3880318-1 01/12/23 01:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Suspended Solids	U		2.50	2.50

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

L1574838-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1574838-01 01/12/23 01:12 • (DUP) R3880318-3 01/12/23 01:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Suspended Solids	34.8	36.4	1	4.49		5

<sup>4</sup>Cn

<sup>5</sup>Sr

L1574963-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1574963-03 01/12/23 01:12 • (DUP) R3880318-4 01/12/23 01:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Suspended Solids	118	128	1	8.47	J3	5

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

Laboratory Control Sample (LCS)

(LCS) R3880318-2 01/12/23 01:12

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Suspended Solids	773	832	108	85.7-114	

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3881411-2 01/16/23 14:08

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

Sample Narrative:

BLANK: Endpoint pH 4.5

L1574277-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1574277-01 01/16/23 14:44 • (DUP) R3881411-3 01/16/23 14:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Alkalinity	385	386	1	0.172		20
Alkalinity,Bicarbonate	385	386	1	0.172		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1574723-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1574723-01 01/16/23 15:36 • (DUP) R3881411-4 01/16/23 15:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Alkalinity	62.8	63.5	1	1.02		20
Alkalinity,Bicarbonate	62.8	63.5	1	1.02		20
Alkalinity,Carbonate	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5



Laboratory Control Sample (LCS)

(LCS) R3881411-1 01/16/23 14:01

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

Sample Narrative:

LCS: Endpoint pH 4.5

<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) R3881708-1 01/17/23 11:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Nitrate-Nitrite	U		0.0500	0.100

<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

L1574241-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1574241-01 01/17/23 11:43 • (DUP) R3881708-3 01/17/23 11:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	0.558	0.560	1	0.358		20

L1574726-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1574726-01 01/17/23 11:50 • (DUP) R3881708-6 01/17/23 11:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	2.06	2.07	1	0.484		20

Laboratory Control Sample (LCS)

(LCS) R3881708-2 01/17/23 11:42

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	2.50	2.60	104	90.0-110	

L1574241-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1574241-01 01/17/23 11:43 • (MS) R3881708-4 01/17/23 11:46 • (MSD) R3881708-5 01/17/23 11:47

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Nitrate-Nitrite	2.50	0.558	3.20	3.15	106	104	1	90.0-110			1.57	20

L1574726-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1574726-01 01/17/23 11:50 • (MS) R3881708-7 01/17/23 11:56

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2.50	2.06	4.51	98.0	1	90.0-110	

Method Blank (MB)

(MB) R3881332-1 01/16/23 12:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Phosphorus,Total	0.0586	↓	0.0350	0.100

1 Cp

2 Tc

3 Ss

L1574681-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1574681-03 01/16/23 12:27 • (DUP) R3881332-3 01/16/23 12:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Phosphorus,Total	1.39	1.39	1	0.000		20

4 Cn

5 Sr

L1574685-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1574685-01 01/16/23 12:32 • (DUP) R3881332-6 01/16/23 12:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Phosphorus,Total	1.82	1.83	1	0.548		20

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3881332-2 01/16/23 12:26

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Phosphorus,Total	2.47	2.41	97.6	83.2-116	

9 Sc

L1574681-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1574681-03 01/16/23 12:27 • (MS) R3881332-4 01/16/23 12:30 • (MSD) R3881332-5 01/16/23 12:31

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Phosphorus,Total	2.50	1.39	3.88	3.84	99.6	98.0	1	90.0-110			1.04	20

L1574617-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1574617-01 01/13/23 22:27 • (DUP) R3880959-2 01/13/23 22:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	9.04	9.05	1	0.111		1

Sample Narrative:

OS: 9.04 at 21.1C

DUP: 9.05 at 19C

L1575989-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1575989-01 01/13/23 22:27 • (DUP) R3880959-3 01/13/23 22:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.29	7.32	1	0.411		1

Sample Narrative:

OS: 7.29 at 19.4C

DUP: 7.32 at 18.8C

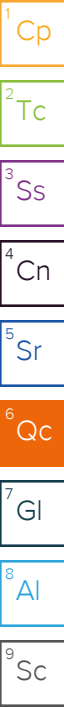
Laboratory Control Sample (LCS)

(LCS) R3880959-1 01/13/23 22:27

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.90	99.0	99.0-101	

Sample Narrative:

LCS: 9.9 at 20C



Method Blank (MB)

(MB) R3880918-1 01/13/23 16:40

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

Sample Narrative:

BLANK: at 25C

L1573788-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1573788-13 01/13/23 16:40 • (DUP) R3880918-3 01/13/23 16:40

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	4780	4850	1	1.45		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1574963-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1574963-04 01/13/23 16:40 • (DUP) R3880918-4 01/13/23 16:40

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	15000	14900	1	0.536		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3880918-2 01/13/23 16:40

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Specific Conductance	1120	1110	98.7	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) R3880255-1 01/11/23 19:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Bromide	U		0.353	1.00
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate	U		0.0480	0.100
Nitrite	U		0.0420	0.100
Sulfate	U		0.594	5.00

<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

L1574813-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1574813-01 01/11/23 21:19 • (DUP) R3880255-3 01/11/23 21:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Bromide	U	U	1	0.000		15
Chloride	108	108	1	0.00614		15
Fluoride	0.542	0.544	1	0.350		15
Nitrate	0.313	0.310	1	1.09		15
Nitrite	U	U	1	0.000		15
Sulfate	55.1	54.9	1	0.367		15

Laboratory Control Sample (LCS)

(LCS) R3880255-2 01/11/23 19:28

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Bromide	40.0	40.8	102	80.0-120	
Chloride	40.0	40.5	101	80.0-120	
Fluoride	8.00	8.57	107	80.0-120	
Nitrate	8.00	7.81	97.6	80.0-120	
Nitrite	8.00	8.37	105	80.0-120	
Sulfate	40.0	40.9	102	80.0-120	

L1574813-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1574813-01 01/11/23 21:19 • (MS) R3880255-4 01/11/23 22:23 • (MSD) R3880255-5 01/11/23 22:39

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Bromide	50.0	U	50.9	51.3	102	103	1	80.0-120			0.822	15
Chloride	50.0	108	152	153	89.2	89.9	1	80.0-120			0.230	15

L1574813-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1574813-01 01/11/23 21:19 • (MS) R3880255-4 01/11/23 22:23 • (MSD) R3880255-5 01/11/23 22:39

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Fluoride	5.00	0.542	5.87	5.90	107	107	1	80.0-120			0.530	15
Nitrate	5.00	0.313	5.09	5.29	95.6	99.5	1	80.0-120			3.70	15
Nitrite	5.00	U	5.24	5.28	105	106	1	80.0-120			0.610	15
Sulfate	50.0	55.1	102	102	93.3	94.3	1	80.0-120			0.492	15

<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) R3880603-1 01/12/23 17:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Barium	U		0.000736	0.00500
Boron	U		0.0200	0.200
Calcium	U		0.0793	1.00
Iron	U		0.0180	0.100
Magnesium	U		0.0853	1.00
Manganese	U		0.000934	0.0100
Potassium	U		0.261	2.00
Selenium	U		0.00735	0.0100
Sodium	U		0.504	3.00
Strontium	U		0.000640	0.0100

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS)

(LCS) R3880603-2 01/12/23 17:09

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Barium	1.00	0.968	96.8	80.0-120	
Boron	1.00	0.982	98.2	80.0-120	
Calcium	10.0	10.1	101	80.0-120	
Iron	10.0	9.84	98.4	80.0-120	
Magnesium	10.0	9.80	98.0	80.0-120	
Manganese	1.00	0.953	95.3	80.0-120	
Potassium	10.0	9.93	99.3	80.0-120	
Selenium	1.00	0.928	92.8	80.0-120	
Sodium	10.0	9.82	98.2	80.0-120	
Strontium	1.00	0.997	99.7	80.0-120	

7 Gl

8 Al

9 Sc

L1574963-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1574963-01 01/12/23 17:12 • (MS) R3880603-4 01/12/23 17:17 • (MSD) R3880603-5 01/12/23 17:20

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Barium	1.00	56.2	56.5	56.8	27.0	59.5	1	75.0-125	<u>EV</u>	<u>EV</u>	0.574	20
Boron	1.00	3.72	4.63	4.61	90.4	89.0	1	75.0-125			0.313	20
Calcium	10.0	384	384	387	0.000	30.1	1	75.0-125	<u>V</u>	<u>V</u>	0.802	20
Iron	10.0	128	136	135	77.6	71.3	1	75.0-125		<u>V</u>	0.466	20
Magnesium	10.0	16.0	25.0	25.1	90.0	91.0	1	75.0-125			0.413	20
Manganese	1.00	1.71	2.56	2.55	84.8	83.3	1	75.0-125			0.565	20
Potassium	10.0	118	127	128	87.0	102	1	75.0-125			1.14	20

L1574963-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1574963-01 01/12/23 17:12 • (MS) R3880603-4 01/12/23 17:17 • (MSD) R3880603-5 01/12/23 17:20

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Selenium	1.00	0.0116	1.06	1.11	105	110	1	75.0-125			4.59	20
Sodium	10.0	4620	4520	4540	0.000	0.000	1	75.0-125	<u>EV</u>	<u>EV</u>	0.573	20
Strontium	1.00	58.4	57.9	58.7	0.000	24.0	1	75.0-125	<u>EV</u>	<u>EV</u>	1.30	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) R3881338-3 01/12/23 11:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	U		0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.6			78.0-120

Laboratory Control Sample (LCS)

(LCS) R3881338-2 01/12/23 10:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.44	98.9	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			106	78.0-120	

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

Method Blank (MB)

(MB) R3881778-3 01/16/23 12:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	U		0.0314	0.100
<sup>(S)</sup> a,a,a-Trifluorotoluene(FID)	98.0			78.0-120

Laboratory Control Sample (LCS)

(LCS) R3881778-2 01/16/23 11:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.66	103	72.0-127	
<sup>(S)</sup> a,a,a-Trifluorotoluene(FID)			104	78.0-120	

<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) R3880453-3 01/11/23 20:39

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Xylenes, Total	U		0.000174	0.00300
Naphthalene	U		0.00100	0.00500
(S) Toluene-d8	116			80.0-120
(S) 4-Bromofluorobenzene	109			77.0-126
(S) 1,2-Dichloroethane-d4	87.2			70.0-130

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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

(LCS) R3880453-1 01/11/23 19:41 • (LCSD) R3880453-2 01/11/23 20:00

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 %
Benzene	0.00500	0.00463	0.00472	92.6	94.4	70.0-123			1.93	20
Toluene	0.00500	0.00525	0.00539	105	108	79.0-120			2.63	20
Ethylbenzene	0.00500	0.00550	0.00574	110	115	79.0-123			4.27	20
Xylenes, Total	0.0150	0.0162	0.0172	108	115	79.0-123			5.99	20
Naphthalene	0.00500	0.00434	0.00456	86.8	91.2	54.0-135			4.94	20
(S) Toluene-d8				114	116	80.0-120				
(S) 4-Bromofluorobenzene				104	105	77.0-126				
(S) 1,2-Dichloroethane-d4				91.6	91.6	70.0-130				

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3880778-2 01/12/23 09:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Toluene	U		0.000278	0.00100
(S) Toluene-d8	102			80.0-120
(S) 4-Bromofluorobenzene	90.1			77.0-126
(S) 1,2-Dichloroethane-d4	101			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3880778-1 01/12/23 08:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Toluene	0.00500	0.00525	105	79.0-120	
(S) Toluene-d8			99.7	80.0-120	
(S) 4-Bromofluorobenzene			91.0	77.0-126	
(S) 1,2-Dichloroethane-d4			93.8	70.0-130	

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

Method Blank (MB)

(MB) R3880383-1 01/12/23 08:09

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
C10-C28 Diesel Range	0.0319	↓	0.0222	0.100
C28-C36 Motor Oil Range	U		0.0118	0.100
(S) o-Terphenyl	77.5			52.0-156

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

(LCS) R3880383-2 01/12/23 08:28 • (LCSD) R3880383-3 01/12/23 08:48

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 %
C10-C28 Diesel Range	1.50	1.82	1.74	121	116	50.0-150			4.49	20
(S) o-Terphenyl				115	94.0	52.0-156				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 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.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

# ACCREDITATIONS & LOCATIONS

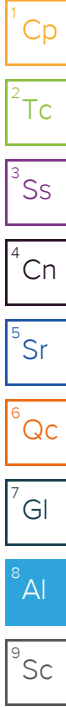
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



Company Name/Address:  
**Caerus Oil and Gas**  
 143 Diamond Avenue  
 Parachute, CO 81635

Billing Information:  
 Accounts Payable  
 1001 17th St., Ste. 1600  
 Denver, CO 80202

Report to:  
**Brett Middleton**

Email To:  
 JJanicek@caerusoilandgas.com; brollins@caerus

Project Description: **909J**

City/State Collected: **Parachute, CO**

Please Circle:  
 PT  MD  CT  ET

Phone: **970-285-2653**

Client Project #

Lab Project #

Collected by (print):  
*W. Le Harmon*

Site/Facility ID #

P.O. #


Collected by (signature):  
*[Signature]*

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  
**ASAP**

Immediately Packed on Ice N \_\_\_ Y

Analysis / Container / Preservative																
ALK, ALKBI, ALKCA 250ml HDPE-NoPres	Br, Cl, F, SO4 250ml HDPE-NoPres	DRONMLVI 40ml Amb-HCl-BT	DRONMLVI 40ml Amb-NoPres	GRO 40ml Amb HCl	GRO 40ml Amb-NoPres	NO2NO3 250ml HDPE-H2SO4	PT 250ml HDPE-H2SO4	RA-226/228 1L-HDPE-Add-HNO3	SPCON 250ml HDPE-NoPres							
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Chain of Custody Page \_\_\_ of \_\_\_  
  
 PEOPLE ADVANCING SCIENCE  
**MT JULIET, TN**  
 12065 Lebanon Rd Mount Juliet, TN 37122  
 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

SDG # **45749103**  
 Table # **B224**  
 Template: **T215555**  
 Prelogin: **P958511**  
 PM: **824 - Chris Ward**  
 Shipped Via: **FedEx Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK, ALKBI, ALKCA 250ml HDPE-NoPres	Br, Cl, F, SO4 250ml HDPE-NoPres	DRONMLVI 40ml Amb-HCl-BT	DRONMLVI 40ml Amb-NoPres	GRO 40ml Amb HCl	GRO 40ml Amb-NoPres	NO2NO3 250ml HDPE-H2SO4	PT 250ml HDPE-H2SO4	RA-226/228 1L-HDPE-Add-HNO3	SPCON 250ml HDPE-NoPres	Remarks	Sample # (lab only)
RA1-07164-WMFK	grab	GW	Surface	1/10/23	1130	25	X	X	X	X	X	X	X	X	X	X		-01
RI1-07245-WMFK	grab	GW	Surface	1/10/23	1040	25	X	X	X	X	X	X	X	X	X	X		-02
K8W-10908-ILES	grab	GW	Surface	1/10/23	0840	25	X	X	X	X	X	X	X	X	X	X		-03
K8W-19147-WMFK	grab	GW	Surface	1/10/23	0940	25	X	X	X	X	X	X	X	X	X	X		-04
		GW				25	X	X	X	X	X	X	X	X	X	X		
		GW				25	X	X	X	X	X	X	X	X	X	X		
		GW				25	X	X	X	X	X	X	X	X	X	X		
		GW				25	X	X	X	X	X	X	X	X	X	X		
		GW				25	X	X	X	X	X	X	X	X	X	X		
		GW				25	X	X	X	X	X	X	X	X	X	X		

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

Remarks: **Metals - Ba, B, Ca, Fe, K, Mg, Mn, Na, Se, Sr**  
 pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_  
 Samples returned via:  
 \_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier \_\_\_\_\_  
 Tracking # \_\_\_\_\_

Sample Receipt Checklist  
 COC Seal Present/Intact:  Y  N  
 COC Signed/Accurate:  Y  N  
 Bottles arrive intact:  Y  N  
 Correct bottles used:  Y  N  
 Sufficient volume sent:  Y  N  
 If Applicable  
 VOA Zero Headspace:  Y  N  
 Preservation Correct/Checked:  Y  N  
 RAD Screen <0.5 mR/hr:  Y  N

Relinquished by: (Signature)  
*[Signature]*  
 Date: **1/10/23**  
 Time: **1545**

Received by: (Signature)  
*[Signature]*  
 Date: **1/10/23**  
 Time: **1600**

Trip Blank Received: **3** Yes/No  
 HCl/MeOH TBR  
 Temp: \_\_\_\_\_ °C  
 Bottles Received: **100**

If preservation required by Login: Date/Time  
 Hold: \_\_\_\_\_  
 Condition: **NCF / OK**

Company Name/Address: **Caerus Oil and Gas**  
 143 Diamond Avenue  
 Parachute, CO 81635

Billing Information:  
 Accounts Payable  
 1001 17th St., Ste. 1600  
 Denver, CO 80202

Report to: **Brett Middleton**  
 Email To: **JJanicek@caerusoilandgas.com; brollins@caerus**

Project Description: **9095** City/State Collected: **Parachute, CO** Please Circle: **PT**  **MD**  **CT**  **ET**

Phone: **970-285-2653** Client Project # \_\_\_\_\_ Lab Project # \_\_\_\_\_



**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>

Collected by (print): **Wm Haerow** Site/Facility ID # \_\_\_\_\_ P.O. # \_\_\_\_\_

Collected by (signature): *[Signature]* **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: **ASAP** No. of Cntrs \_\_\_\_\_

Immediately Packed on Ice **N**  **Y**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TDS 1L-HDPE NoPres	TSS 1L-HDPE NoPres	Total Metals 250mlHDPE-HNO3	V8260BTEXN 40mlAmb-HCl	V8260BTEXN 40mlAmb-NoPres	pH 125mlHDPE-NoPres	Remarks	Sample # (lab only)
RA1-07164-WMFK	Grab	GW	Surface	1/10/23	1130	25	X	X	X	X	X	X	X	-01
RI1-07245-WMFK	Grab	GW	Surface	1/10/23	1040	25	X	X	X	X	X	X	X	-02
K8W-10908-ILGS	Grab	GW	Surface	1/10/23	0840	25	X	X	X	X	X	X	X	-03
K8W-19147-WMFK	Grab	GW	Surface	1/10/23	0940	25	X	X	X	X	X	X	X	-04
		GW				25	X	X	X	X	X	X		
		GW				25	X	X	X	X	X	X		
		GW				25	X	X	X	X	X	X		
		GW				25	X	X	X	X	X	X		
		GW				25	X	X	X	X	X	X		

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

Remarks: **Metals - Ba,B,Ca,Fe,K,Mg,Mn,Na,Se,Sr**

Samples returned via:  UPS  FedEx  Courier \_\_\_\_\_ Tracking # \_\_\_\_\_

Relinquished by: (Signature) *[Signature]* Date: **1/10/23** Time: **1545** Received by: (Signature) *[Signature]* Trip Blank Received: Yes / No  HCL / MeOH  TBR

Relinquished by: (Signature) *[Signature]* Date: **1/10/23** Time: **1610** Received by: (Signature) \_\_\_\_\_ Temp: \_\_\_\_\_ °C Bottles Received: \_\_\_\_\_ If preservation required by Login: Date/Time \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received for lab by: (Signature) *[Signature]* Date: **1-11-23** Time: **8:30** Hold: \_\_\_\_\_ Condition: **NCF / OK**

**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
<b>If Applicable</b>		
VOA Zero Headspace:	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
Preservation Correct/Checked:	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
RAD Screen <0.5 mR/hr:	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N

15249603

<u>Tracking Numbers</u>		<u>Temperature</u>
6126 6537 5170		C13A2 1.078=1.0
6126 6537 5103		C13A2 4.340=4.3