

Terra Energy Partners

Sample Delivery Group: L1774269
Samples Received: 09/05/2024
Project Number: TERENGPCO-WWL
Description:
Site: TR 32-28-597
Report To: Mike G. / Kris R. / Bruce S.
743 Horizon Ct. Suite 330
Grand Junction, CO 81506

Entire Report Reviewed By:



Chris Ward
Project Manager

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Pace Analytical National

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¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SAMPLE SUMMARY

GETTY 12C L1774269-01 GW

Collected by: Kori Straub
 Collected date/time: 09/04/24 10:50
 Received date/time: 09/05/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Microbiology by Method BART	WG2357026	1	09/15/24 00:00	09/15/24 00:00	HMH	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2356973	1	09/05/24 16:02	09/05/24 18:23	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2356671	1	09/08/24 06:16	09/08/24 06:16	KA	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2356784	1	09/05/24 19:50	09/05/24 19:50	CAT	Mt. Juliet, TN
Wet Chemistry by Method 365.4	WG2357163	1	09/05/24 19:37	09/05/24 22:26	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2357392	1	09/06/24 11:27	09/06/24 11:27	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050A	WG2356996	1	09/05/24 22:50	09/05/24 22:50	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2356635	1	09/05/24 23:25	09/05/24 23:25	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2356635	1	09/06/24 14:10	09/06/24 14:10	DLH	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2358931	1	09/10/24 14:14	09/10/24 19:55	MAP	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2359380	1	09/10/24 14:49	09/10/24 14:49	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2356827	1	09/05/24 16:26	09/05/24 16:26	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2358049	1	09/07/24 16:01	09/07/24 16:01	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2359153	1	09/10/24 08:09	09/12/24 19:26	AUU	Mt. Juliet, TN

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

TRIP BLANK L1774269-02 GW

Collected by: Kori Straub
 Collected date/time: 09/04/24 00:00
 Received date/time: 09/05/24 11:07

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2358049	1	09/07/24 11:54	09/07/24 11:54	JBE	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

Project Narrative

The following reactions were observed on one or more samples within this SDG.

- BL Blackened Liquid
- BR Brown Ring
- CL Cloudy Growth
- FO Foam
- BB Blackened Base
- BT Blackening around Ball
- SR Slime Ring around Ball
- PB Pale Blue Glow in UV Light

Sample Delivery Group (SDG) Narrative

Analysis was filtered in the laboratory.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1774269-01	GETTY 12C	6010B

The Laboratory is not accredited for specific analytes on the associated Sample/Method. These analytes are flagged in the Sample Results section of the report with an asterisk (*).

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1774269-01	GETTY 12C	9056A

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Microbiology by Method BART

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Iron Related Bacteria	Present		1	09/15/2024 00:00	WG2357026
Slime Forming Bacteria	Present		1	09/15/2024 00:00	WG2357026
Sulfate Reducing Bacteria	Present		1	09/15/2024 00:00	WG2357026

Sample Narrative:

L1774269-01 WG2357026: IRB Approximate Population=9,000 CFU/mL. Reactions=BR/FO/BL.

L1774269-01 WG2357026: SLYM Approximate Population=67,000 CFU/mL. Reactions=CL/PB/SR.

L1774269-01 WG2357026: SRB Approximate Population=500,000 CFU/mL. Reactions=BT/BB.

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	397		10.0	1	09/05/2024 18:23	WG2356973

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	287		8.45	20.0	1	09/08/2024 06:16	WG2356671
Alkalinity,Bicarbonate	287		8.45	20.0	1	09/08/2024 06:16	WG2356671
Alkalinity,Carbonate	U		8.45	20.0	1	09/08/2024 06:16	WG2356671
Alkalinity,Hydroxide	U		8.45	20.0	1	09/08/2024 06:16	WG2356671

Sample Narrative:

L1774269-01 WG2356671: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	0.453		0.0500	0.100	1	09/05/2024 19:50	WG2356784

Wet Chemistry by Method 365.4

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Phosphorus,Total	1.38		0.0350	0.100	1	09/05/2024 22:26	WG2357163

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.97	T8	1	09/06/2024 11:27	WG2357392

Sample Narrative:

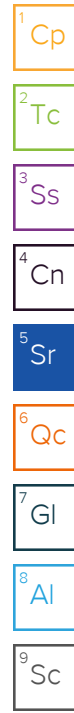
L1774269-01 WG2357392: 7.97 at 23C

Wet Chemistry by Method 9050A

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	681		10.0	1	09/05/2024 22:50	WG2356996

Sample Narrative:

L1774269-01 WG2356996: at 25C



GETTY 12C

SAMPLE RESULTS - 01

Collected date/time: 09/04/24 10:50

L1774269

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
*Bromide	1.12		0.680	1.00	1	09/05/2024 23:25	WG2356635
Chloride	28.8		0.547	1.00	1	09/05/2024 23:25	WG2356635
Fluoride	0.165		0.0761	0.150	1	09/06/2024 14:10	WG2356635
Nitrate as (N)	0.750		0.0884	0.100	1	09/05/2024 23:25	WG2356635
Nitrite as (N)	0.137		0.0794	0.100	1	09/05/2024 23:25	WG2356635
Sulfate	45.7		0.637	5.00	1	09/05/2024 23:25	WG2356635

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

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Barium,Dissolved	0.131		0.000736	0.00500	1	09/10/2024 19:55	WG2358931
Boron,Dissolved	0.0280	J	0.0200	0.200	1	09/10/2024 19:55	WG2358931
Calcium,Dissolved	61.6		0.0793	1.00	1	09/10/2024 19:55	WG2358931
Iron,Dissolved	U		0.0180	0.100	1	09/10/2024 19:55	WG2358931
Magnesium,Dissolved	25.7		0.0853	1.00	1	09/10/2024 19:55	WG2358931
Manganese,Dissolved	0.00204	J	0.000934	0.0100	1	09/10/2024 19:55	WG2358931
Potassium,Dissolved	0.843	J	0.261	2.00	1	09/10/2024 19:55	WG2358931
Selenium,Dissolved	U		0.00735	0.0100	1	09/10/2024 19:55	WG2358931
Sodium,Dissolved	47.3		0.504	3.00	1	09/10/2024 19:55	WG2358931
Strontium,Dissolved	1.09		0.000640	0.0100	1	09/10/2024 19:55	WG2358931

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TPH (GC/FID) Low Fraction	U		31.4	100	1	09/10/2024 14:49	WG2359380
(S) a,a,a-Trifluorotoluene(FID)	98.1			78.0-120		09/10/2024 14:49	WG2359380

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	U		2.91	10.0	1	09/05/2024 16:26	WG2356827
Ethane	U		4.07	13.0	1	09/05/2024 16:26	WG2356827
Propane	U		5.48	18.6	1	09/05/2024 16:26	WG2356827

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	09/07/2024 16:01	WG2358049
Toluene	U		0.278	1.00	1	09/07/2024 16:01	WG2358049
Ethylbenzene	U		0.137	1.00	1	09/07/2024 16:01	WG2358049
Xylenes, Total	U		0.174	3.00	1	09/07/2024 16:01	WG2358049
(S) Toluene-d8	91.6			80.0-120		09/07/2024 16:01	WG2358049
(S) 4-Bromofluorobenzene	104			77.0-126		09/07/2024 16:01	WG2358049
(S) 1,2-Dichloroethane-d4	101			70.0-130		09/07/2024 16:01	WG2358049

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
C10-C28 Diesel Range	57.6	J	22.2	100	1	09/12/2024 19:26	WG2359153
C28-C36 Motor Oil Range	92.2	J	11.8	100	1	09/12/2024 19:26	WG2359153
(S) o-Terphenyl	98.9			52.0-156		09/12/2024 19:26	WG2359153

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	09/07/2024 11:54	WG2358049
Toluene	U		0.278	1.00	1	09/07/2024 11:54	WG2358049
Ethylbenzene	U		0.137	1.00	1	09/07/2024 11:54	WG2358049
Xylenes, Total	U		0.174	3.00	1	09/07/2024 11:54	WG2358049
<i>(S) Toluene-d8</i>	94.8			80.0-120		09/07/2024 11:54	WG2358049
<i>(S) 4-Bromofluorobenzene</i>	107			77.0-126		09/07/2024 11:54	WG2358049
<i>(S) 1,2-Dichloroethane-d4</i>	102			70.0-130		09/07/2024 11:54	WG2358049

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4116985-1 09/05/24 18:23

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

¹Cp

²Tc

³Ss

L1774238-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1774238-01 09/05/24 18:23 • (DUP) R4116985-3 09/05/24 18:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	699	677	1	3.10		10

⁴Cn

⁵Sr

Laboratory Control Sample (LCS)

(LCS) R4116985-2 09/05/24 18:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800	8620	98.0	85.0-115	

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4116900-2 09/08/24 04:23

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
Alkalinity,Hydroxide	U		8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1774093-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1774093-01 09/08/24 04:38 • (DUP) R4116900-3 09/08/24 04:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Alkalinity	160	158	1	1.07		20
Alkalinity,Bicarbonate	160	158	1	1.07		20
Alkalinity,Carbonate	U	U	1	0.000		20
Alkalinity,Hydroxide	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1774269-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1774269-01 09/08/24 06:16 • (DUP) R4116900-4 09/08/24 06:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Alkalinity	287	285	1	0.818		20
Alkalinity,Bicarbonate	287	285	1	0.818		20
Alkalinity,Carbonate	U	U	1	0.000		20
Alkalinity,Hydroxide	U	U	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4116900-1 09/08/24 04:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Alkalinity	100	101	101	90.0-110	

Sample Narrative:

LCS: Endpoint pH 4.5

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4116198-1 09/05/24 19:17

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1774089-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1774089-04 09/05/24 19:25 • (DUP) R4116198-3 09/05/24 19:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	2.00	2.02	1	0.995		20

L1774130-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1774130-01 09/05/24 19:27 • (DUP) R4116198-4 09/05/24 19:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate-Nitrite	0.100	0.0961	1	3.98	↓	20

Laboratory Control Sample (LCS)

(LCS) R4116198-2 09/05/24 19:18

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Nitrate-Nitrite	2.50	2.48	99.2	90.0-110	

L1774130-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1774130-02 09/05/24 19:33 • (MS) R4116198-5 09/05/24 19:35

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate-Nitrite	2.50	0.844	3.39	102	1	90.0-110	

L1774089-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1774089-03 09/05/24 19:21 • (MS) R4116198-6 09/05/24 19:59 • (MSD) R4116198-7 09/05/24 20:00

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	0.411	3.07	3.14	106	109	1	90.0-110			2.25	20

Method Blank (MB)

(MB) R4116207-1 09/05/24 22:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Phosphorus,Total	0.0380	⬇	0.0350	0.100

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1774130-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1774130-02 09/05/24 22:12 • (DUP) R4116207-5 09/05/24 22:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Phosphorus,Total	1.62	1.65	1	1.83		20

L1774186-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1774186-01 09/05/24 22:22 • (DUP) R4116207-6 09/05/24 22:23

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Phosphorus,Total	4.73	4.70	1	0.636		20

Laboratory Control Sample (LCS)

(LCS) R4116207-2 09/05/24 22:04

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Phosphorus,Total	1.81	1.93	107	85.0-115	

L1774130-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1774130-01 09/05/24 22:08 • (MS) R4116207-3 09/05/24 22:09 • (MSD) R4116207-4 09/05/24 22:11

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	2.76	5.41	5.45	106	108	1	90.0-110	E	E	0.737	20

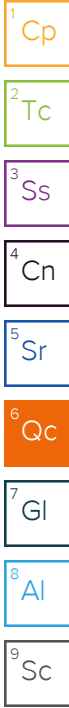
L1774238-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1774238-01 09/06/24 11:27 • (DUP) R4116467-2 09/06/24 11:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	9.06	9.06	1	0.000		1

Sample Narrative:

OS: 9.06 at 19.3C
 DUP: 9.06 at 19.5C



L1774590-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1774590-02 09/06/24 11:27 • (DUP) R4116467-3 09/06/24 11:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.62	6.60	1	0.303		1

Sample Narrative:

OS: 6.62 at 20.8C
 DUP: 6.6 at 20.1C

Laboratory Control Sample (LCS)

(LCS) R4116467-1 09/06/24 11:27

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 21.3C

Method Blank (MB)

(MB) R4116211-1 09/05/24 22:50

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

L1773677-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1773677-01 09/05/24 22:50 • (DUP) R4116211-3 09/05/24 22:50

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Specific Conductance	5050	5050	1	0.000		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1774373-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1774373-01 09/05/24 22:50 • (DUP) R4116211-4 09/05/24 22:50

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Specific Conductance	29200	29200	1	0.137		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4116211-2 09/05/24 22:50

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	746	102	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) R4116338-1 09/05/24 18:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Bromide	U		0.680	1.00
Chloride	U		0.547	1.00
Fluoride	U		0.0761	0.150
Nitrate as (N)	U		0.0884	0.100
Nitrite as (N)	U		0.0794	0.100
Sulfate	U		0.637	5.00

L1773699-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1773699-01 09/05/24 19:36 • (DUP) R4116338-3 09/05/24 19:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Bromide	0.919	0.923	1	0.413	U	15
Chloride	19.2	18.8	1	2.26		15
Fluoride	0.0767	U	1	200	P1	15
Nitrate as (N)	8.60	8.51	1	1.08		15
Nitrite as (N)	0.108	0.103	1	4.84		15
Sulfate	19.6	19.1	1	2.57		15

L1773813-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1773813-01 09/05/24 20:30 • (DUP) R4116338-6 09/05/24 20:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Bromide	1.15	1.13	1	1.17		15
Chloride	12.5	12.5	1	0.374		15
Fluoride	U	U	1	0.000		15
Nitrate as (N)	0.159	0.155	1	2.49		15
Nitrite as (N)	0.0941	0.0933	1	0.854	U	15
Sulfate	1.26	1.24	1	1.13	U	15

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R4116338-2 09/05/24 18:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromide	40.0	36.9	92.2	80.0-120	
Chloride	40.0	38.4	96.1	80.0-120	
Fluoride	8.00	8.40	105	80.0-120	
Nitrate as (N)	8.00	7.73	96.7	80.0-120	
Nitrite as (N)	8.00	7.93	99.1	80.0-120	
Sulfate	40.0	38.5	96.2	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

L1773699-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773699-01 09/05/24 19:36 • (MS) R4116338-4 09/05/24 20:03 • (MSD) R4116338-5 09/05/24 20:16

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 %
Bromide	40.0	0.919	37.7	37.4	91.8	91.2	1	80.0-120			0.691	15
Chloride	40.0	19.2	55.0	54.5	89.3	88.3	1	80.0-120			0.789	15
Fluoride	8.00	0.0767	8.30	8.21	103	102	1	80.0-120			1.09	15
Nitrate as (N)	8.00	8.60	15.2	15.2	83.1	82.0	1	80.0-120			0.545	15
Nitrite as (N)	8.00	0.108	8.07	7.98	99.6	98.4	1	80.0-120			1.15	15
Sulfate	40.0	19.6	55.8	55.3	90.5	89.2	1	80.0-120			0.941	15

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1773813-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1773813-01 09/05/24 20:30 • (MS) R4116338-7 09/05/24 20:57

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Bromide	40.0	1.15	37.6	91.1	1	80.0-120	
Chloride	40.0	12.5	49.2	91.8	1	80.0-120	
Fluoride	8.00	U	8.16	102	1	80.0-120	
Nitrate as (N)	8.00	0.159	7.84	96.0	1	80.0-120	
Nitrite as (N)	8.00	0.0941	7.95	98.2	1	80.0-120	

Method Blank (MB)

(MB) R4118066-15 09/10/24 19:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Barium,Dissolved	U		0.000736	0.00500
Boron,Dissolved	U		0.0200	0.200
Calcium,Dissolved	U		0.0793	1.00
Iron,Dissolved	0.0184	U	0.0180	0.100
Magnesium,Dissolved	U		0.0853	1.00
Manganese,Dissolved	U		0.000934	0.0100
Potassium,Dissolved	U		0.261	2.00
Selenium,Dissolved	U		0.00735	0.0100
Sodium,Dissolved	U		0.504	3.00
Strontium,Dissolved	U		0.000640	0.0100

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Laboratory Control Sample (LCS)

(LCS) R4118066-16 09/10/24 19:34

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Barium,Dissolved	1.00	1.00	100	80.0-120	
Boron,Dissolved	1.00	0.942	94.2	80.0-120	
Calcium,Dissolved	10.0	10.1	101	80.0-120	
Iron,Dissolved	10.0	9.65	96.5	80.0-120	
Magnesium,Dissolved	10.0	9.21	92.1	80.0-120	
Manganese,Dissolved	1.00	0.985	98.5	80.0-120	
Potassium,Dissolved	10.0	10.1	101	80.0-120	
Selenium,Dissolved	1.00	0.914	91.4	80.0-120	
Sodium,Dissolved	10.0	9.77	97.7	80.0-120	
Strontium,Dissolved	1.00	1.00	100	80.0-120	

L1774049-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1774049-01 09/10/24 19:36 • (MS) R4118066-18 09/10/24 19:39 • (MSD) R4118066-19 09/10/24 19:41

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,Dissolved	1.00	0.0879	1.09	1.13	100	104	1	75.0-125			3.38	20
Boron,Dissolved	1.00	1.17	2.11	2.16	93.7	99.0	1	75.0-125			2.45	20
Calcium,Dissolved	10.0	440	440	444	0.000	40.2	1	75.0-125	U	U	0.934	20
Iron,Dissolved	10.0	7.01	16.6	17.0	95.6	99.6	1	75.0-125			2.37	20
Magnesium,Dissolved	10.0	179	187	187	74.5	81.2	1	75.0-125	U		0.363	20
Manganese,Dissolved	1.00	4.70	5.55	5.53	85.0	83.1	1	75.0-125			0.354	20
Potassium,Dissolved	10.0	2.83	13.0	13.5	102	107	1	75.0-125			3.74	20

L1774049-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1774049-01 09/10/24 19:36 • (MS) R4118066-18 09/10/24 19:39 • (MSD) R4118066-19 09/10/24 19:41

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,Dissolved	1.00	U	1.06	1.09	106	109	1	75.0-125			3.06	20
Sodium,Dissolved	10.0	137	144	145	74.2	88.2	1	75.0-125	V		0.967	20
Strontium,Dissolved	1.00	1.63	2.61	2.65	97.4	102	1	75.0-125			1.73	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4118958-2 09/10/24 10:43

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPH (GC/FID) Low Fraction	U		31.4	100
^(S) a,a,a-Trifluorotoluene(FID)	100			78.0-120

Laboratory Control Sample (LCS)

(LCS) R4118958-1 09/10/24 09:59

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5000	4390	87.8	72.0-127	
^(S) a,a,a-Trifluorotoluene(FID)			102	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) R4116104-2 09/05/24 15:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Propane	U		5.48	18.6

L1774037-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1774037-04 09/05/24 16:00 • (DUP) R4116104-3 09/05/24 17:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	U	U	1	0.000		20
Ethane	U	U	1	0.000		20
Propane	U	U	1	0.000		20

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

(LCS) R4116104-1 09/05/24 15:41 • (LCSD) R4116104-4 09/05/24 17:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	70.6	68.0	104	100	85.0-115			3.75	20
Ethane	129	126	126	97.7	97.7	85.0-115			0.000	20
Propane	186	177	178	95.2	95.7	85.0-115			0.563	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4117925-2 09/07/24 09:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Xylenes, Total	U		0.174	3.00
<i>(S) Toluene-d8</i>	88.6			80.0-120
<i>(S) 4-Bromofluorobenzene</i>	103			77.0-126
<i>(S) 1,2-Dichloroethane-d4</i>	89.9			70.0-130

Laboratory Control Sample (LCS)

(LCS) R4117925-1 09/07/24 08:37

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Benzene	5.00	5.45	109	70.0-123	
Toluene	5.00	4.66	93.2	79.0-120	
Ethylbenzene	5.00	4.38	87.6	79.0-123	
Xylenes, Total	15.0	12.8	85.3	79.0-123	
<i>(S) Toluene-d8</i>			86.8	80.0-120	
<i>(S) 4-Bromofluorobenzene</i>			105	77.0-126	
<i>(S) 1,2-Dichloroethane-d4</i>			90.9	70.0-130	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4118358-1 09/11/24 08:40

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
C10-C28 Diesel Range	U		22.2	100
C28-C36 Motor Oil Range	U		11.8	100
<i>(S) o-Terphenyl</i>	73.5			52.0-156

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

(LCS) R4118358-2 09/11/24 09:00 • (LCSD) R4118358-3 09/11/24 09:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	1500	1460	1440	97.3	96.0	50.0-150			1.38	20
<i>(S) o-Terphenyl</i>				95.5	93.5	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.

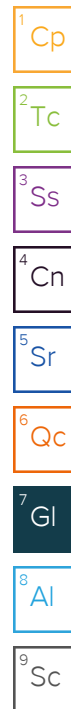
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. 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

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.
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.
V	The sample concentration is too high to evaluate accurate spike recoveries.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Company Name/Address: **Terra Energy Partners**
 743 Horizon Ct. Suite 330
 Grand Junction, CO 81506

Billing Information:
Tammy Gose
 1058 County Road 215
 Parachute, CO 81635

Chain of Custody Page of
 PH-10BDH0941
 TRC-3223A228

Report to: **Kris Rowe / Mike Gardner / Bruce Smith**

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

Phone: **970-242-0170** Client Project # Lab Project # **TERENGPCO-WWL**

Collected by (print): **Kori Straub** Site/Facility ID # **TR 32-28-597** P.O. #

Collected by (signature): *Kori Straub* **Rush?** (Lab MUST Be Notified) **Quote # Rule 615** Date Results Needed

Immediately Packed on Ice N Y Same Day Five Day Next Day 5 Day (Rad Only) Two Day 10 Day (Rad Only) Three Day

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALK, Bi/Ca/OH, pH, COND 250mlHDPE-NoPres	BART Microbiological	Br, Cl, F, NO2, NO3, SO4 125mlHDPE-NoPres	DRONMLVI 40mlAmb-HCl-BT	Diss Metals 250mlHDPE-NoPres	GRO 40mlAmb HCl	NO2NO3, PT 250mlHDPE-H2SO4	RSK175 40mlAmb HCl	TDS 1L-HDPE NoPres	V8260BTEX 40mlAmb-HCl	Remarks	Sample # (lab only)
Getty 12C	Grab	SNW		9/14/24	1050	15	X	X	X	X	X	X	X	X	X	X		-01
Trip Blank																		-02

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

Remarks: Diss Metals - Ba, B, Ca, Fe, K, Mg, Mn, Na, Se, Sr also - Total Phosphorus
 Analyze according to Rule 615 List

Tracking # **7315 3201 3383**

Temp °C Flow Other

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) *Kori Straub* Date: **9/14/24** Time: **1500** Received by: (Signature) Trip Blank Received: Yes No
 HCl/MeOH TBR **1**

Relinquished by: (Signature) Date: Time: Received by: (Signature) Temp: **23+0.3=26** °C Bottles Received: **15**

Relinquished by: (Signature) Date: Time: Received for lab by: (Signature) *R* Date: **9/15/24** Time: **0900** Hold: Condition: **NCF / OK**