

Entrada Consulting Group

Sample Delivery Group: L1461902

Samples Received: 02/16/2022

Project Number:

Description: 697-16D Spill

Report To: Stuart Hall
240 Mesa Avenue
Grand Junction, CO 81501

Entire Report Reviewed By:



Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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SAMPLE SUMMARY

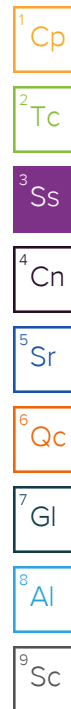
20220215-697-16D-POR-(0-6') L1461902-01 Solid

Collected by
J. McLarty

Collected date/time
02/15/22 11:30

Received date/time
02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1820574	1	02/22/22 11:54	02/22/22 11:54	ZSA	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1819506	1	02/17/22 17:48	02/24/22 22:38	JER	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1819443	1	02/17/22 08:00	02/17/22 11:00	GI	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1817531	1	02/17/22 04:39	02/17/22 10:27	ARD	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1819342	1	02/17/22 09:16	02/19/22 20:49	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1822157	1	02/22/22 20:52	02/23/22 09:39	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1819845	5	02/17/22 17:01	02/19/22 11:58	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1820135	5000	02/16/22 19:14	02/18/22 14:45	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1819298	40	02/16/22 19:14	02/16/22 23:03	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1820598	200	02/16/22 19:14	02/19/22 23:56	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1821904	20	02/22/22 20:58	02/23/22 08:33	JAS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1821904	5	02/22/22 20:58	02/23/22 06:00	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1821529	1	02/21/22 23:58	02/22/22 14:27	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1821529	20	02/21/22 23:58	02/22/22 18:13	LEA	Mt. Juliet, TN

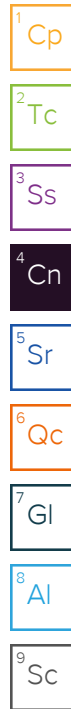


CASE NARRATIVE

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



Chris Ward
Project Manager



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	40.7		1	02/22/2022 11:54	WG1820574

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	02/24/2022 22:38	WG1819506

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.38	T8	1	02/17/2022 11:00	WG1819443

Sample Narrative:

L1461902-01 WG1819443: 8.38 at 20.2C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	1310		10.0	1	02/17/2022 10:27	WG1817531

Sample Narrative:

L1461902-01 WG1817531: at 25C

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	497		0.0852	0.500	1	02/19/2022 20:49	WG1819342
Cadmium	0.249	J	0.0471	0.500	1	02/19/2022 20:49	WG1819342
Copper	23.9		0.400	2.00	1	02/19/2022 20:49	WG1819342
Lead	12.7		0.208	0.500	1	02/19/2022 20:49	WG1819342
Nickel	17.7		0.132	2.00	1	02/19/2022 20:49	WG1819342
Selenium	U		0.764	2.00	1	02/19/2022 20:49	WG1819342
Silver	U		0.127	1.00	1	02/19/2022 20:49	WG1819342
Zinc	98.1		0.832	5.00	1	02/19/2022 20:49	WG1819342

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.660		0.0167	0.200	1	02/23/2022 09:39	WG1822157

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	15.5		0.100	1.00	5	02/19/2022 11:58	WG1819845

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	5310		109	500	5000	02/18/2022 14:45	WG1820135
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	86.3			77.0-120		02/18/2022 14:45	WG1820135

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	5.79		0.0187	0.0400	40	02/16/2022 23:03	WG1819298
Toluene	94.0		0.0520	0.200	40	02/16/2022 23:03	WG1819298
Ethylbenzene	15.3		0.0295	0.100	40	02/16/2022 23:03	WG1819298
Xylenes, Total	646		0.176	1.30	200	02/19/2022 23:56	WG1820598
Naphthalene	6.18		0.195	0.500	40	02/16/2022 23:03	WG1819298
1,2,4-Trimethylbenzene	54.5		0.0632	0.200	40	02/16/2022 23:03	WG1819298
1,3,5-Trimethylbenzene	50.3		0.0800	0.200	40	02/16/2022 23:03	WG1819298
(S) Toluene-d8	92.1			75.0-131		02/16/2022 23:03	WG1819298
(S) Toluene-d8	101			75.0-131		02/19/2022 23:56	WG1820598
(S) 4-Bromofluorobenzene	110			67.0-138		02/16/2022 23:03	WG1819298
(S) 4-Bromofluorobenzene	106			67.0-138		02/19/2022 23:56	WG1820598
(S) 1,2-Dichloroethane-d4	120			70.0-130		02/16/2022 23:03	WG1819298
(S) 1,2-Dichloroethane-d4	106			70.0-130		02/19/2022 23:56	WG1820598

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2000		32.2	80.0	20	02/23/2022 08:33	WG1821904
C28-C36 Motor Oil Range	284		1.37	20.0	5	02/23/2022 06:00	WG1821904
(S) o-Terphenyl	0.000	J7		18.0-148		02/23/2022 08:33	WG1821904
(S) o-Terphenyl	40.2			18.0-148		02/23/2022 06:00	WG1821904

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0191		0.00230	0.00600	1	02/22/2022 14:27	WG1821529
Acenaphthene	U	J3 J5	0.00209	0.00600	1	02/22/2022 14:27	WG1821529
Acenaphthylene	U		0.00216	0.00600	1	02/22/2022 14:27	WG1821529
Benzo(a)anthracene	U		0.00173	0.00600	1	02/22/2022 14:27	WG1821529
Benzo(a)pyrene	U		0.00179	0.00600	1	02/22/2022 14:27	WG1821529
Benzo(b)fluoranthene	U		0.00153	0.00600	1	02/22/2022 14:27	WG1821529
Benzo(g,h,i)perylene	U		0.00177	0.00600	1	02/22/2022 14:27	WG1821529
Benzo(k)fluoranthene	U		0.00215	0.00600	1	02/22/2022 14:27	WG1821529
Chrysene	0.00296	J	0.00232	0.00600	1	02/22/2022 14:27	WG1821529
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	02/22/2022 14:27	WG1821529
Fluoranthene	0.00363	J	0.00227	0.00600	1	02/22/2022 14:27	WG1821529
Fluorene	0.189	J3 J5	0.00205	0.00600	1	02/22/2022 14:27	WG1821529
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	02/22/2022 14:27	WG1821529
Naphthalene	3.14	V	0.00408	0.0200	1	02/22/2022 14:27	WG1821529
Phenanthrene	0.127	J3 J5	0.00231	0.00600	1	02/22/2022 14:27	WG1821529
Pyrene	0.00611		0.00200	0.00600	1	02/22/2022 14:27	WG1821529
1-Methylnaphthalene	2.26	J3 V	0.00449	0.0200	1	02/22/2022 14:27	WG1821529
2-Methylnaphthalene	6.07	J3 V	0.0854	0.400	20	02/22/2022 18:13	WG1821529
2-Chloronaphthalene	U		0.00466	0.0200	1	02/22/2022 14:27	WG1821529
(S) p-Terphenyl-d14	86.6	J7		23.0-120		02/22/2022 18:13	WG1821529
(S) p-Terphenyl-d14	90.7			23.0-120		02/22/2022 14:27	WG1821529
(S) Nitrobenzene-d5	0.000	J2		14.0-149		02/22/2022 14:27	WG1821529
(S) Nitrobenzene-d5	0.000	J7		14.0-149		02/22/2022 18:13	WG1821529
(S) 2-Fluorobiphenyl	100			34.0-125		02/22/2022 14:27	WG1821529
(S) 2-Fluorobiphenyl	91.1	J7		34.0-125		02/22/2022 18:13	WG1821529

Sample Narrative:

L1461902-01 WG1821529: Surrogate failure due to matrix interference

Method Blank (MB)

(MB) R3765483-1 02/24/22 19:57

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

L1460840-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1460840-05 02/24/22 20:08 • (DUP) R3765483-3 02/24/22 20:13

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

L1460962-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1460962-03 02/24/22 21:20 • (DUP) R3765483-4 02/24/22 21:26

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

Laboratory Control Sample (LCS)

(LCS) R3765483-2 02/24/22 20:03

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Hexavalent Chromium	10.0	9.88	98.8	80.0-120	

L1461772-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1461772-01 02/24/22 22:02 • (MS) R3765483-7 02/24/22 22:17

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/kg	mg/kg	mg/kg	%		%	
Hexavalent Chromium	641	U	U	0.000	50	75.0-125	J6

Sample Narrative:

- OS: Sample is a reducer.
- MS: Sample is a reducer.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1461772-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1461772-01 02/24/22 22:02 • (MS) R3765483-5 02/24/22 22:07 • (MSD) R3765483-6 02/24/22 22:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	U	U	U	0.000	0.000	1	75.0-125	J6	J6	0.000	20

Sample Narrative:

- OS: Sample is a reducer.
- MS: Sample is a reducer.
- MSD: Sample is a reducer.

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

L1461902-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1461902-01 02/17/22 11:00 • (DUP) R3760988-2 02/17/22 11:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.38	8.42	1	0.476		1

Sample Narrative:

OS: 8.38 at 20.2C

DUP: 8.42 at 20.6C

L1462056-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1462056-01 02/17/22 11:00 • (DUP) R3760988-3 02/17/22 11:00

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.54	8.53	1	0.117		1

Sample Narrative:

OS: 8.54 at 20.2C

DUP: 8.53 at 20.2C

Laboratory Control Sample (LCS)

(LCS) R3760988-1 02/17/22 11:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.02 at 19.6C



Method Blank (MB)

(MB) R3760964-1 02/17/22 10:27

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

Sample Narrative:
BLANK: at 25C

L1460758-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1460758-02 02/17/22 10:27 • (DUP) R3760964-3 02/17/22 10:27

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	9660	9210	1	4.77		20

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

L1461902-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1461902-01 02/17/22 10:27 • (DUP) R3760964-4 02/17/22 10:27

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1310	1290	1	1.85		20

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

Laboratory Control Sample (LCS)

(LCS) R3760964-2 02/17/22 10:27

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	268	265	99.0	85.0-115	

Sample Narrative:
LCS: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3761751-1 02/19/22 19:26

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3761751-2 02/19/22 19:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	103	103	80.0-120	
Cadmium	100	102	102	80.0-120	
Copper	100	105	105	80.0-120	
Lead	100	102	102	80.0-120	
Nickel	100	102	102	80.0-120	
Selenium	100	102	102	80.0-120	
Silver	20.0	18.1	90.5	80.0-120	
Zinc	100	99.3	99.3	80.0-120	

L1461768-28 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1461768-28 02/19/22 19:32 • (MS) R3761751-5 02/19/22 19:40 • (MSD) R3761751-6 02/19/22 19:43

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	125	234	240	109	115	1	75.0-125			2.55	20
Cadmium	100	0.260	102	105	101	105	1	75.0-125			3.31	20
Copper	100	53.2	159	173	106	120	1	75.0-125			8.47	20
Lead	100	13.7	118	121	104	107	1	75.0-125			2.37	20
Nickel	100	17.5	117	123	99.4	105	1	75.0-125			5.04	20
Selenium	100	U	101	104	101	104	1	75.0-125			3.07	20
Silver	20.0	U	17.9	18.4	89.3	92.0	1	75.0-125			2.93	20
Zinc	100	63.7	145	153	81.3	89.8	1	75.0-125			5.73	20

L1461768-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1461768-30 02/19/22 19:45 • (MS) R3761751-8 02/19/22 19:51 • (MSD) R3761751-9 02/19/22 19:59

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	100	133	273	255	139	122	1	75.0-125	J5		6.73	20
Cadmium	100	0.203	99.4	105	99.2	105	1	75.0-125			5.76	20
Copper	100	27.5	135	139	108	112	1	75.0-125			3.11	20
Lead	100	17.0	109	117	92.2	99.6	1	75.0-125			6.49	20
Nickel	100	9.76	113	116	103	106	1	75.0-125			2.54	20
Selenium	100	U	99.0	105	99.0	105	1	75.0-125			6.23	20
Silver	20.0	U	17.6	18.5	88.0	92.6	1	75.0-125			5.16	20
Zinc	100	44.7	145	146	100	101	1	75.0-125			0.655	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3763024-1 02/23/22 09:30

Analyte	MB Result mg/l	<u>MB Qualifier</u>	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R3763024-2 02/23/22 09:33 • (LCSD) R3763024-3 02/23/22 09:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	0.995	0.955	99.5	95.5	80.0-120			4.13	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3761698-1 02/19/22 11:51

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

Laboratory Control Sample (LCS)

(LCS) R3761698-2 02/19/22 11:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	105	105	80.0-120	

L1461902-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1461902-01 02/19/22 11:58 • (MS) R3761698-5 02/19/22 12:08 • (MSD) R3761698-6 02/19/22 12:11

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	15.5	129	118	113	103	5	75.0-125			8.30	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3761477-2 02/18/22 11:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	1.62	⬇	0.543	2.50
(S) a,a,a-Trifluorotoluene(FID)	88.7			77.0-120

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

(LCS) R3761477-1 02/18/22 09:55 • (LCSD) R3761477-3 02/18/22 12:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.09	5.84	92.5	106	72.0-127			13.7	20
(S) a,a,a-Trifluorotoluene(FID)				109	114	77.0-120				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3761458-3 02/16/22 20:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Naphthalene	U		0.00488	0.0125
Toluene	U		0.00130	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	106			75.0-131
(S) 4-Bromofluorobenzene	96.6			67.0-138
(S) 1,2-Dichloroethane-d4	111			70.0-130

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

(LCS) R3761458-1 02/16/22 18:47 • (LCSD) R3761458-2 02/16/22 19:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.113	0.104	90.4	83.2	70.0-123			8.29	20
Ethylbenzene	0.125	0.115	0.104	92.0	83.2	74.0-126			10.0	20
Naphthalene	0.125	0.0809	0.0829	64.7	66.3	59.0-130			2.44	20
Toluene	0.125	0.117	0.107	93.6	85.6	75.0-121			8.93	20
1,2,4-Trimethylbenzene	0.125	0.122	0.113	97.6	90.4	70.0-126			7.66	20
1,3,5-Trimethylbenzene	0.125	0.123	0.114	98.4	91.2	73.0-127			7.59	20
(S) Toluene-d8				99.7	100	75.0-131				
(S) 4-Bromofluorobenzene				95.7	96.9	67.0-138				
(S) 1,2-Dichloroethane-d4				115	118	70.0-130				

L1462168-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1462168-01 02/17/22 00:00 • (MS) R3761458-4 02/17/22 03:10 • (MSD) R3761458-5 02/17/22 03:29

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	U	0.120	0.108	96.0	86.4	1	10.0-149			10.5	37
Ethylbenzene	0.125	U	0.125	0.114	100	91.2	1	10.0-160			9.21	38
Naphthalene	0.125	0.00685	0.0883	0.0886	65.2	65.4	1	10.0-160			0.339	36
Toluene	0.125	U	0.128	0.117	102	93.6	1	10.0-156			8.98	38
1,2,4-Trimethylbenzene	0.125	0.00388	0.134	0.123	104	95.3	1	10.0-160			8.56	36
1,3,5-Trimethylbenzene	0.125	U	0.137	0.126	110	101	1	10.0-160			8.37	38
(S) Toluene-d8					103	102		75.0-131				
(S) 4-Bromofluorobenzene					96.4	96.1		67.0-138				
(S) 1,2-Dichloroethane-d4					102	107		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) R3761782-2 02/19/22 20:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	101			75.0-131
(S) 4-Bromofluorobenzene	88.1			67.0-138
(S) 1,2-Dichloroethane-d4	105			70.0-130

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

(LCS) R3761782-1 02/19/22 19:06 • (LCSD) R3761782-3 02/20/22 04:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Xylenes, Total	0.375	0.411	0.364	110	97.1	72.0-127			12.1	20
(S) Toluene-d8				95.1	97.6	75.0-131				
(S) 4-Bromofluorobenzene				97.2	96.1	67.0-138				
(S) 1,2-Dichloroethane-d4				118	100	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3762800-1 02/23/22 04:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	0.760	J	0.274	4.00
(S) o-Terphenyl	64.9			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3762800-2 02/23/22 04:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.6	77.2	50.0-150	
(S) o-Terphenyl			89.9	18.0-148	

L1462346-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1462346-01 02/23/22 04:53 • (MS) R3762800-3 02/23/22 05:06 • (MSD) R3762800-4 02/23/22 05:20

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	4.86	29.8	28.4	49.9	47.1	1	50.0-150	J6	J6	4.81	20
(S) o-Terphenyl					66.2	65.5		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3762378-2 02/22/22 08:22

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	101			14.0-149
(S) 2-Fluorobiphenyl	96.9			34.0-125
(S) p-Terphenyl-d14	99.6			23.0-120

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3762378-1 02/22/22 08:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0639	79.9	50.0-126	
Acenaphthene	0.0800	0.0682	85.3	50.0-120	
Acenaphthylene	0.0800	0.0641	80.1	50.0-120	
Benzo(a)anthracene	0.0800	0.0673	84.1	45.0-120	
Benzo(a)pyrene	0.0800	0.0691	86.4	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0710	88.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0693	86.6	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0717	89.6	49.0-125	
Chrysene	0.0800	0.0723	90.4	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0647	80.9	47.0-125	
Fluoranthene	0.0800	0.0685	85.6	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3762378-1 02/22/22 08:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0669	83.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0664	83.0	46.0-125	
Naphthalene	0.0800	0.0675	84.4	50.0-120	
Phenanthrene	0.0800	0.0658	82.3	47.0-120	
Pyrene	0.0800	0.0713	89.1	43.0-123	
1-Methylnaphthalene	0.0800	0.0674	84.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0689	86.1	50.0-120	
2-Chloronaphthalene	0.0800	0.0682	85.3	50.0-120	
(S) Nitrobenzene-d5			108	14.0-149	
(S) 2-Fluorobiphenyl			101	34.0-125	
(S) p-Terphenyl-d14			102	23.0-120	

L1461902-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1461902-01 02/22/22 14:27 • (MS) R3762378-3 02/22/22 14:44 • (MSD) R3762378-4 02/22/22 15:02

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0792	0.0191	0.0534	0.0463	43.3	34.2	1	10.0-145			14.2	30
Acenaphthene	0.0792	U	0.164	0.116	207	146	1	14.0-127	J5	J3 J5	34.3	27
Acenaphthylene	0.0792	U	0.0634	0.0541	80.1	68.0	1	21.0-124			15.8	25
Benzo(a)anthracene	0.0792	U	0.0648	0.0585	81.8	73.5	1	10.0-139			10.2	30
Benzo(a)pyrene	0.0792	U	0.0675	0.0631	85.2	79.3	1	10.0-141			6.74	31
Benzo(b)fluoranthene	0.0792	U	0.0599	0.0560	75.6	70.4	1	10.0-140			6.73	36
Benzo(g,h,i)perylene	0.0792	U	0.0597	0.0560	75.4	70.4	1	10.0-140			6.40	33
Benzo(k)fluoranthene	0.0792	U	0.0597	0.0545	75.4	68.5	1	10.0-137			9.11	31
Chrysene	0.0792	0.00296	0.0709	0.0650	85.8	77.9	1	10.0-145			8.68	30
Dibenz(a,h)anthracene	0.0792	U	0.0571	0.0518	72.1	65.1	1	10.0-132			9.73	31
Fluoranthene	0.0792	0.00363	0.0655	0.0565	78.1	66.4	1	10.0-153			14.8	33
Fluorene	0.0792	0.189	0.337	0.219	187	37.7	1	11.0-130	J5	J3	42.4	29
Indeno(1,2,3-cd)pyrene	0.0792	U	0.0608	0.0568	76.8	71.4	1	10.0-137			6.80	32
Naphthalene	0.0792	3.14	3.71	2.83	720	0.000	1	10.0-135	V	V	26.9	27
Phenanthrene	0.0792	0.127	0.247	0.163	152	45.2	1	10.0-144	J5	J3	41.0	31
Pyrene	0.0792	0.00611	0.0721	0.0612	83.3	69.2	1	10.0-148			16.4	35
1-Methylnaphthalene	0.0792	2.26	2.81	1.91	694	0.000	1	10.0-142	V	J3 V	38.1	28
2-Methylnaphthalene	0.0792	6.74	8.33	5.74	2010	0.000	1	10.0-137	E V	E J3 V	36.8	28
2-Chloronaphthalene	0.0792	U	0.0586	0.0513	74.0	64.4	1	29.0-120			13.3	24
(S) Nitrobenzene-d5					0.000	0.000		14.0-149	J2	J2		
(S) 2-Fluorobiphenyl					107	94.3		34.0-125				
(S) p-Terphenyl-d14					88.6	82.3		23.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1461902-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1461902-01 02/22/22 14:27 • (MS) R3762378-3 02/22/22 14:44 • (MSD) R3762378-4 02/22/22 15:02

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%

Sample Narrative:
OS: Surrogate failure due to matrix interference

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

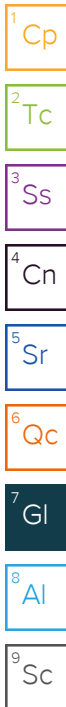
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
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.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
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

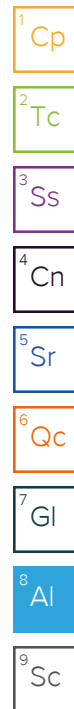
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



Entrada Consulting Group

330 Grand Avenue
Grand Junction, CO 81501

Report to:
Stuart Hall

Project Description:

697-16D Spill

City/State
Collected:

De Beque, CO

Please Circle:

PT MT CT ET

Phone: 970-640-0568

Client Project #

Lab Project #

ENTCONGJCO-915

Collected by (print):

J. Mcarty

Collected by (signature):

J. Mcarty

Immediately

Packed on Ice N Y ☒

Site/Facility ID #

P.O. #

Rush? (Lab MUST Be Notified)

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
☒ Three Day

Date Results Needed

No.
of
Cntrs

Sample ID

Comp/Grab

Matrix *

Depth

Date

Time

Analysis / Container / Preservative

Pres
Chk

Chain of Custody

Page ___ of ___



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



SDG #

G106

Acctnum: ENTCONGJCO

Template: T180603

Prelogin: P822819

PM: 824 - Chris Ward

PB:

Shipped Via: FedEx Ground

Remarks

Sample # (lab only)

20220215-697-16D-POR-(0'-6") Grab SS 0'-6" 2/15/22 1130 3

X X X X X

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

Remarks:

pH Temp

Flow Other

Samples returned via:

UPS ☒ FedEx ☐ Courier

Tracking #

5016 1231 9897

Sample Receipt Checklist

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

Relinquished by: (Signature)

J. Mcarty

Date:

2/15/22

Time:

1500

Received by: (Signature)

J. Mcarty

Trip Blank Received: Yes No

HCL/MeOH
TBR

Relinquished by: (Signature)

J. Mcarty

Date:

2/15/22

Time:

1600

Received by: (Signature)

J. Mcarty

Temp: °C Bottles Received:

BAA7 3.8+0=3.8 3

If preservation required by Login: Date/Time

Relinquished by: (Signature)

J. Mcarty

Date:

2/16/22

Time:

0900

Received for lab by: (Signature)

Jeromin Distrik

Date: Time:

2/16/22 0900

Hold:

Condition:

NCF 1 OK