

Entrada Consulting Group

Sample Delivery Group: L1562735
Samples Received: 12/01/2022
Project Number: 022-133
Description: Summit OD-11

Report To: Matt Kasten
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Suite C
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Entire Report Reviewed By:



Chris Ward
Project Manager

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SAMPLE SUMMARY

20221129-OD11-WWALL (7') L1562735-01 Solid

Collected by
C. Mace

Collected date/time
11/29/22 13:40

Received date/time
12/01/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1969913	1	12/11/22 20:50	12/11/22 20:50	ABL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1968197	1	12/04/22 20:56	12/06/22 05:30	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1968962	1	12/04/22 08:02	12/05/22 08:52	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1969809	1	12/07/22 09:00	12/07/22 11:40	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1973132	1	12/12/22 17:25	12/12/22 21:36	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1967967	20	12/07/22 17:21	12/08/22 17:01	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1967967	5	12/07/22 17:21	12/08/22 16:34	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1968355	25	12/01/22 17:09	12/02/22 15:54	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1968948	1	12/01/22 17:09	12/04/22 03:08	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1968090	1	12/02/22 04:01	12/02/22 12:34	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1968093	1	12/02/22 04:08	12/02/22 12:08	JMB	Mt. Juliet, TN

20221129-OD11-NWALL (9') L1562735-02 Solid

Collected by
C. Mace

Collected date/time
11/29/22 15:30

Received date/time
12/01/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1969913	1	12/11/22 20:58	12/11/22 20:58	ABL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1968197	1	12/04/22 20:56	12/06/22 05:35	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1968962	1	12/04/22 08:02	12/05/22 08:52	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1969809	1	12/07/22 09:00	12/07/22 11:40	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1973132	1	12/12/22 17:25	12/12/22 21:39	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1967967	20	12/07/22 17:21	12/08/22 17:05	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1967967	5	12/07/22 17:21	12/08/22 16:38	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1968748	1	12/01/22 17:09	12/03/22 16:03	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1968948	1.01	12/01/22 17:09	12/04/22 03:27	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1968090	1	12/02/22 04:01	12/02/22 14:32	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1968093	1	12/02/22 04:08	12/02/22 12:28	JMB	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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	6.95		1	12/11/2022 20:50	WG1969913

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	12/06/2022 05:30	WG1968197

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	8.61	T8	1	12/05/2022 08:52	WG1968962	

Sample Narrative:

L1562735-01 WG1968962: 8.61 at 20C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	734		10.0	1	12/07/2022 11:40	WG1969809

Sample Narrative:

L1562735-01 WG1969809: at 25C

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		0.200	1	12/12/2022 21:36	WG1973132

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	8.08		1.00	5	12/08/2022 16:34	WG1967967
Barium	201		10.0	20	12/08/2022 17:01	WG1967967
Cadmium	ND		1.00	5	12/08/2022 16:34	WG1967967
Copper	13.4		5.00	5	12/08/2022 16:34	WG1967967
Lead	8.19		2.00	5	12/08/2022 16:34	WG1967967
Nickel	16.7		2.50	5	12/08/2022 16:34	WG1967967
Selenium	ND	J4	2.50	5	12/08/2022 16:34	WG1967967
Silver	ND		0.500	5	12/08/2022 16:34	WG1967967
Zinc	38.4		25.0	5	12/08/2022 16:34	WG1967967

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		2.50	25	12/02/2022 15:54	WG1968355
(S) a,a,a-Trifluorotoluene(FID)	100		77.0-120		12/02/2022 15:54	WG1968355

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	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00545		0.00100	1	12/04/2022 03:08	WG1968948
Toluene	0.0358		0.00500	1	12/04/2022 03:08	WG1968948
Ethylbenzene	0.00550		0.00250	1	12/04/2022 03:08	WG1968948
Xylenes, Total	0.110		0.00650	1	12/04/2022 03:08	WG1968948
1,2,4-Trimethylbenzene	0.0119		0.00500	1	12/04/2022 03:08	WG1968948
1,3,5-Trimethylbenzene	0.0135		0.00500	1	12/04/2022 03:08	WG1968948
(S) Toluene-d8	103		75.0-131		12/04/2022 03:08	WG1968948
(S) 4-Bromofluorobenzene	102		67.0-138		12/04/2022 03:08	WG1968948
(S) 1,2-Dichloroethane-d4	91.3		70.0-130		12/04/2022 03:08	WG1968948

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		4.00	1	12/02/2022 12:34	WG1968090
C28-C36 Motor Oil Range	9.58	B	4.00	1	12/02/2022 12:34	WG1968090
(S) o-Terphenyl	59.7		18.0-148		12/02/2022 12:34	WG1968090

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	12/02/2022 12:08	WG1968093
Anthracene	ND		0.00600	1	12/02/2022 12:08	WG1968093
Benzo(a)anthracene	ND		0.00600	1	12/02/2022 12:08	WG1968093
Benzo(b)fluoranthene	ND		0.00600	1	12/02/2022 12:08	WG1968093
Benzo(k)fluoranthene	ND		0.00600	1	12/02/2022 12:08	WG1968093
Benzo(a)pyrene	ND		0.00600	1	12/02/2022 12:08	WG1968093
Chrysene	ND		0.00600	1	12/02/2022 12:08	WG1968093
Dibenz(a,h)anthracene	ND		0.00600	1	12/02/2022 12:08	WG1968093
Fluoranthene	ND		0.00600	1	12/02/2022 12:08	WG1968093
Fluorene	ND		0.00600	1	12/02/2022 12:08	WG1968093
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	12/02/2022 12:08	WG1968093
1-Methylnaphthalene	ND		0.0200	1	12/02/2022 12:08	WG1968093
2-Methylnaphthalene	ND		0.0200	1	12/02/2022 12:08	WG1968093
Naphthalene	ND		0.0200	1	12/02/2022 12:08	WG1968093
Pyrene	ND		0.00600	1	12/02/2022 12:08	WG1968093
(S) p-Terphenyl-d14	92.2		23.0-120		12/02/2022 12:08	WG1968093
(S) Nitrobenzene-d5	78.8		14.0-149		12/02/2022 12:08	WG1968093
(S) 2-Fluorobiphenyl	83.1		34.0-125		12/02/2022 12:08	WG1968093

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.608		1	12/11/2022 20:58	WG1969913

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	12/06/2022 05:35	WG1968197

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	8.29	T8		1	12/05/2022 08:52	WG1968962

Sample Narrative:

L1562735-02 WG1968962: 8.29 at 19.8C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	167		10.0	1	12/07/2022 11:40	WG1969809

Sample Narrative:

L1562735-02 WG1969809: at 25C

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		0.200	1	12/12/2022 21:39	WG1973132

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	9.37		1.00	5	12/08/2022 16:38	WG1967967
Barium	229		10.0	20	12/08/2022 17:05	WG1967967
Cadmium	ND		1.00	5	12/08/2022 16:38	WG1967967
Copper	15.8		5.00	5	12/08/2022 16:38	WG1967967
Lead	9.64		2.00	5	12/08/2022 16:38	WG1967967
Nickel	20.5		2.50	5	12/08/2022 16:38	WG1967967
Selenium	ND	J4	2.50	5	12/08/2022 16:38	WG1967967
Silver	ND		0.500	5	12/08/2022 16:38	WG1967967
Zinc	43.9		25.0	5	12/08/2022 16:38	WG1967967

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.468		0.100	1	12/03/2022 16:03	WG1968748
(S) a,a,a-Trifluorotoluene(FID)	96.4		77.0-120		12/03/2022 16:03	WG1968748

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	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00879		0.00101	1.01	12/04/2022 03:27	WG1968948
Toluene	0.0753		0.00505	1.01	12/04/2022 03:27	WG1968948
Ethylbenzene	0.00601		0.00253	1.01	12/04/2022 03:27	WG1968948
Xylenes, Total	0.525		0.00656	1.01	12/04/2022 03:27	WG1968948
1,2,4-Trimethylbenzene	0.0253		0.00505	1.01	12/04/2022 03:27	WG1968948
1,3,5-Trimethylbenzene	0.0405		0.00505	1.01	12/04/2022 03:27	WG1968948
(S) Toluene-d8	104		75.0-131		12/04/2022 03:27	WG1968948
(S) 4-Bromofluorobenzene	105		67.0-138		12/04/2022 03:27	WG1968948
(S) 1,2-Dichloroethane-d4	89.4		70.0-130		12/04/2022 03:27	WG1968948

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	9.83		4.00	1	12/02/2022 14:32	WG1968090
C28-C36 Motor Oil Range	18.2		4.00	1	12/02/2022 14:32	WG1968090
(S) o-Terphenyl	61.7		18.0-148		12/02/2022 14:32	WG1968090

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	12/02/2022 12:28	WG1968093
Anthracene	ND		0.00600	1	12/02/2022 12:28	WG1968093
Benzo(a)anthracene	ND		0.00600	1	12/02/2022 12:28	WG1968093
Benzo(b)fluoranthene	ND		0.00600	1	12/02/2022 12:28	WG1968093
Benzo(k)fluoranthene	ND		0.00600	1	12/02/2022 12:28	WG1968093
Benzo(a)pyrene	ND		0.00600	1	12/02/2022 12:28	WG1968093
Chrysene	ND		0.00600	1	12/02/2022 12:28	WG1968093
Dibenz(a,h)anthracene	ND		0.00600	1	12/02/2022 12:28	WG1968093
Fluoranthene	ND		0.00600	1	12/02/2022 12:28	WG1968093
Fluorene	ND		0.00600	1	12/02/2022 12:28	WG1968093
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	12/02/2022 12:28	WG1968093
1-Methylnaphthalene	ND		0.0200	1	12/02/2022 12:28	WG1968093
2-Methylnaphthalene	ND		0.0200	1	12/02/2022 12:28	WG1968093
Naphthalene	ND		0.0200	1	12/02/2022 12:28	WG1968093
Pyrene	ND		0.00600	1	12/02/2022 12:28	WG1968093
(S) p-Terphenyl-d14	71.8		23.0-120		12/02/2022 12:28	WG1968093
(S) Nitrobenzene-d5	66.2		14.0-149		12/02/2022 12:28	WG1968093
(S) 2-Fluorobiphenyl	68.5		34.0-125		12/02/2022 12:28	WG1968093

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3868455-1 12/06/22 04:05

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

L1562306-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1562306-09 12/06/22 04:43 • (DUP) R3868455-7 12/06/22 04:49

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

L1563669-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1563669-01 12/06/22 06:22 • (DUP) R3868455-8 12/06/22 06:27

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

Laboratory Control Sample (LCS)

(LCS) R3868455-2 12/06/22 04:12

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

L1562306-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1562306-08 12/06/22 04:17 • (MS) R3868455-4 12/06/22 04:28 • (MSD) R3868455-5 12/06/22 04:33

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Hexavalent Chromium	20.0	ND	11.0	3.14	55.0	15.7	1	75.0-125	J6	J3 J6	111	20

Sample Narrative:

- MS: Matrix spike failure due to matrix.
- MSD: Matrix spike failure due to matrix.

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L1562306-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1562306-08 12/06/22 04:17 • (MS) R3868455-6 12/06/22 04:38

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	638	ND	506	79.3	50	75.0-125	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1563097-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1563097-04 12/05/22 08:52 • (DUP) R3868158-2 12/05/22 08:52

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	7.82	7.84	1	0.255		1

Sample Narrative:

OS: 7.82 at 20C

DUP: 7.84 at 19.9C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1563567-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1563567-03 12/05/22 08:52 • (DUP) R3868158-3 12/05/22 08:52

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	su	su		%		%
pH	8.02	8.01	1	0.125		1

Sample Narrative:

OS: 8.02 at 19.9C

DUP: 8.01 at 20C

Laboratory Control Sample (LCS)

(LCS) R3868158-1 12/05/22 08:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	su	su	%	%	
pH	10.0	9.91	99.1	99.0-101	

Sample Narrative:

LCS: 9.91 at 20.8C

Method Blank (MB)

(MB) R3869102-1 12/07/22 11:40

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

L1562533-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1562533-05 12/07/22 11:40 • (DUP) R3869102-3 12/07/22 11:40

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1330	1340	1	0.673		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1563669-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1563669-03 12/07/22 11:40 • (DUP) R3869102-4 12/07/22 11:40

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	155	155	1	0.452		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3869102-2 12/07/22 11:40

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1090	97.5	85.0-115	

Sample Narrative:

LCS: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3870931-1 12/12/22 20:55

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

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

(LCS) R3870931-2 12/12/22 20:58 • (LCSD) R3870931-3 12/12/22 21:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hot Water Sol. Boron	1.00	0.997	0.980	99.7	98.0	80.0-120			1.76	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3869800-1 12/08/22 15:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

Laboratory Control Sample (LCS)

(LCS) R3869800-2 12/08/22 15:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	103	103	80.0-120	
Barium	100	104	104	80.0-120	
Cadmium	100	107	107	80.0-120	
Copper	100	92.9	92.9	80.0-120	
Lead	100	101	101	80.0-120	
Nickel	100	105	105	80.0-120	
Selenium	100	121	121	80.0-120	J4
Silver	20.0	21.3	107	80.0-120	
Zinc	100	104	104	80.0-120	

7
Gl

8
Al

9
Sc

L1562477-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1562477-16 12/08/22 15:16 • (MS) R3869800-5 12/08/22 15:26 • (MSD) R3869800-6 12/08/22 15:29

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 %
Arsenic	100	6.37	91.5	103	85.1	96.9	5	75.0-125			12.1	20
Barium	100	80.8	164	181	83.4	101	5	75.0-125	E	E	9.98	20
Cadmium	100	2.22	97.9	110	95.7	108	5	75.0-125			11.4	20
Copper	100	11.9	94.9	104	83.0	92.0	5	75.0-125			9.10	20
Lead	100	15.4	102	113	86.5	97.1	5	75.0-125			9.97	20
Nickel	100	19.2	108	124	89.2	105	5	75.0-125			13.8	20
Selenium	100	ND	110	123	109	122	5	75.0-125			11.0	20
Silver	20.0	ND	19.0	21.0	94.3	105	5	75.0-125			10.4	20
Zinc	100	65.7	146	170	79.8	104	5	75.0-125			15.4	20

Method Blank (MB)

(MB) R3867595-2 12/02/22 10:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.543	2.50
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3867595-1 12/02/22 10:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.78	86.9	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			101	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3868998-3 12/03/22 11:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.8			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3868998-2 12/03/22 10:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.67	84.9	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			100	77.0-120	

L1562741-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1562741-03 12/03/22 17:11 • (MS) R3868998-4 12/03/22 20:34 • (MSD) R3868998-5 12/03/22 20:57

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 %
TPH (GC/FID) Low Fraction	5.50	ND	5.36	5.40	97.5	98.2	1	10.0-151			0.743	28
(S) a,a,a-Trifluorotoluene(FID)					103	100		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3868092-3 12/03/22 23:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	101			75.0-131
(S) 4-Bromofluorobenzene	99.8			67.0-138
(S) 1,2-Dichloroethane-d4	89.6			70.0-130

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

(LCS) R3868092-1 12/03/22 22:21 • (LCSD) R3868092-2 12/03/22 22:41

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	0.122	0.117	97.6	93.6	70.0-123			4.18	20
Toluene	0.125	0.116	0.113	92.8	90.4	75.0-121			2.62	20
Ethylbenzene	0.125	0.121	0.120	96.8	96.0	74.0-126			0.830	20
Xylenes, Total	0.375	0.369	0.368	98.4	98.1	72.0-127			0.271	20
1,2,4-Trimethylbenzene	0.125	0.130	0.124	104	99.2	70.0-126			4.72	20
1,3,5-Trimethylbenzene	0.125	0.123	0.117	98.4	93.6	73.0-127			5.00	20
(S) Toluene-d8				98.9	100	75.0-131				
(S) 4-Bromofluorobenzene				98.4	102	67.0-138				
(S) 1,2-Dichloroethane-d4				101	98.9	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3867623-1 12/02/22 11:16

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	1.10	J	0.274	4.00
(S) o-Terphenyl	75.1			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3867623-2 12/02/22 11:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.3	76.6	50.0-150	
(S) o-Terphenyl			99.5	18.0-148	

L1562574-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1562574-05 12/02/22 15:51 • (MS) R3867623-3 12/02/22 16:04 • (MSD) R3867623-4 12/02/22 16:17

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	49.0	4310	5610	6320	2650	4170	20	50.0-150	V	V	11.9	20
(S) o-Terphenyl					0.000	0.000		18.0-148	J7	J7		

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3867977-2 12/02/22 09:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	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
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	91.5			23.0-120
(S) Nitrobenzene-d5	80.5			14.0-149
(S) 2-Fluorobiphenyl	83.3			34.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3867977-1 12/02/22 09:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0636	79.5	50.0-120	
Anthracene	0.0800	0.0674	84.3	50.0-126	
Benzo(a)anthracene	0.0800	0.0775	96.9	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0659	82.4	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0663	82.9	49.0-125	
Benzo(a)pyrene	0.0800	0.0609	76.1	42.0-120	
Chrysene	0.0800	0.0722	90.3	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0645	80.6	47.0-125	
Fluoranthene	0.0800	0.0697	87.1	49.0-129	
Fluorene	0.0800	0.0678	84.8	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0681	85.1	46.0-125	
1-Methylnaphthalene	0.0800	0.0664	83.0	51.0-121	
2-Methylnaphthalene	0.0800	0.0682	85.3	50.0-120	
Naphthalene	0.0800	0.0658	82.3	50.0-120	
Pyrene	0.0800	0.0659	82.4	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3867977-1 12/02/22 09:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
(S) p-Terphenyl-d14			85.0	23.0-120	
(S) Nitrobenzene-d5			81.2	14.0-149	
(S) 2-Fluorobiphenyl			81.2	34.0-125	

L1562364-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1562364-03 12/02/22 15:07 • (MS) R3867977-3 12/02/22 15:27 • (MSD) R3867977-4 12/02/22 15:47

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acenaphthene	0.0760	ND	0.0647	0.0644	85.1	81.3	1	14.0-127			0.465	27
Anthracene	0.0760	ND	0.0653	0.0662	85.9	83.6	1	10.0-145			1.37	30
Benzo(a)anthracene	0.0760	ND	0.0725	0.0734	95.4	92.7	1	10.0-139			1.23	30
Benzo(b)fluoranthene	0.0760	ND	0.0674	0.0682	88.7	86.1	1	10.0-140			1.18	36
Benzo(k)fluoranthene	0.0760	ND	0.0666	0.0673	87.6	85.0	1	10.0-137			1.05	31
Benzo(a)pyrene	0.0760	ND	0.0711	0.0720	93.6	90.9	1	10.0-141			1.26	31
Chrysene	0.0760	ND	0.0734	0.0738	96.6	93.2	1	10.0-145			0.543	30
Dibenz(a,h)anthracene	0.0760	ND	0.0648	0.0659	85.3	83.2	1	10.0-132			1.68	31
Fluoranthene	0.0760	ND	0.0683	0.0688	89.9	86.9	1	10.0-153			0.729	33
Fluorene	0.0760	ND	0.0678	0.0677	89.2	85.5	1	11.0-130			0.148	29
Indeno(1,2,3-cd)pyrene	0.0760	ND	0.0680	0.0694	89.5	87.6	1	10.0-137			2.04	32
1-Methylnaphthalene	0.0760	ND	0.0665	0.0667	87.5	84.2	1	10.0-142			0.300	28
2-Methylnaphthalene	0.0760	ND	0.0676	0.0678	88.9	85.6	1	10.0-137			0.295	28
Naphthalene	0.0760	ND	0.0664	0.0668	87.4	84.3	1	10.0-135			0.601	27
Pyrene	0.0760	ND	0.0697	0.0700	91.7	88.4	1	10.0-148			0.429	35
(S) p-Terphenyl-d14					91.0	87.9		23.0-120				
(S) Nitrobenzene-d5					81.2	79.1		14.0-149				
(S) 2-Fluorobiphenyl					85.5	82.3		34.0-125				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

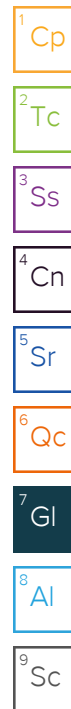
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
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.



[illegible]

Entrada Consulting Group

Sample Delivery Group: L1562738
Samples Received: 12/01/2022
Project Number: 022-133
Description: Summit OD-11

Report To: Stuart Hall
330 Grand Avenue
Suite C
Grand Junction, CO 81501

Entire Report Reviewed By:



Chris Ward
Project Manager

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Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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

SAMPLE SUMMARY

20221129-OD11-BG1 (6') L1562738-01 Solid

Collected by
C. Mace

Collected date/time
11/29/22 10:30

Received date/time
12/01/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1969913	1	12/11/22 21:01	12/11/22 21:01	ABL	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1968962	1	12/04/22 08:02	12/05/22 08:52	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1969809	1	12/07/22 09:00	12/07/22 11:40	NTG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1970203	5	12/09/22 08:43	12/11/22 20:29	LD	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.930		1	12/11/2022 21:01	WG1969913

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.91	T8	1	12/05/2022 08:52	WG1968962

Sample Narrative:

L1562738-01 WG1968962: 7.91 at 20C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	2880		10.0	1	12/07/2022 11:40	WG1969809

Sample Narrative:

L1562738-01 WG1969809: at 25C

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	13.2		1.00	5	12/11/2022 20:29	WG1970203

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

L1563097-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1563097-04 12/05/22 08:52 • (DUP) R3868158-2 12/05/22 08:52

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.82	7.84	1	0.255		1

Sample Narrative:

OS: 7.82 at 20C

DUP: 7.84 at 19.9C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1563567-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1563567-03 12/05/22 08:52 • (DUP) R3868158-3 12/05/22 08:52

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.02	8.01	1	0.125		1

Sample Narrative:

OS: 8.02 at 19.9C

DUP: 8.01 at 20C

Laboratory Control Sample (LCS)

(LCS) R3868158-1 12/05/22 08:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	9.91	99.1	99.0-101	

Sample Narrative:

LCS: 9.91 at 20.8C

Method Blank (MB)

(MB) R3869102-1 12/07/22 11:40

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

L1562533-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1562533-05 12/07/22 11:40 • (DUP) R3869102-3 12/07/22 11:40

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1330	1340	1	0.673		20

Sample Narrative:

OS: at 25C

DUP: at 25C

L1563669-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1563669-03 12/07/22 11:40 • (DUP) R3869102-4 12/07/22 11:40

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	155	155	1	0.452		20

Sample Narrative:

OS: at 25C

DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R3869102-2 12/07/22 11:40

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1090	97.5	85.0-115	

Sample Narrative:

LCS: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3870542-1 12/11/22 19:59

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) R3870542-2 12/11/22 20:02

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

L1563729-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1563729-03 12/11/22 20:06 • (MS) R3870542-5 12/11/22 20:16 • (MSD) R3870542-6 12/11/22 20:19

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	1.10	101	104	99.6	103	5	75.0-125			3.43	20

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.

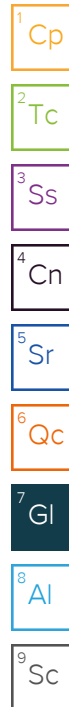
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

T8	Sample(s) received past/too close to holding time expiration.
----	---



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	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.



Company Name/Address: Entrada Consulting Group 330 Grand Avenue, Unit C Grand Junction, CO 81503				Billing Information: Same as left.				Analysis / Container / Preservative										Chain of Custody Page 1 of 1	
Report to: Stuart Hall				Email To: shall@entradainc.com														ESC L.A.B S.C.I.E.N.C.E.S YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859	
Project Description: Summit OD-11				City/State Collected: Parachute, CO														L# L1562738 D190	
Phone: (970) 901-9007		Client Project # 022-133		Lab Project #														Acctnum: ENTCONGJCO	
Fax:																		Template: T180606	
Collected by (print): C. Mace		Site/Facility ID #		P.O. #														Prelogin: P822085	
Collected by (signature): 		Rush? (Lab MUST Be Notified) Same Day200% Next Day100% Two Day50% Three Day25%		Date Results Needed														TSR:	
Immediately																		Cooler:	
Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>																		Shipped Via:	
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Table 915 VOCs	Table 915 PAHs	Table 915 Metals	Table 915 Soil TPH (GRO/DRO/ORO)	Table 915 Hot Water Soluble Boron	Table 915 SAR, EC, pH	Table 915 BTEX, TMBs	Rem./Contaminant	Sample # (lab only)			
20221129-OD11-BG1 (6')		Grab	SS	6'	2022-11-29	1030	2						X			-01			

Entrada Consulting Group

Sample Delivery Group: L1563669
Samples Received: 12/03/2022
Project Number: 022-133
Description: Summit OD-11

Report To: Matt Kasten
330 Grand Avenue
Suite C
Grand Junction, CO 81501

Entire Report Reviewed By:



Chris Ward
Project Manager

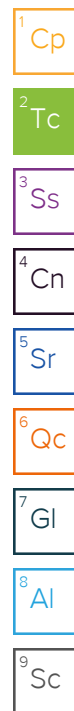
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory 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.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

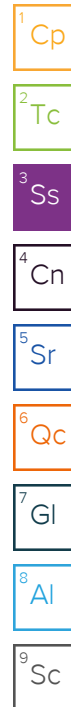
20221202-OD11-SWALL (16') L1563669-01 Solid

Collected by
C. Mace

Collected date/time
12/02/22 12:00

Received date/time
12/03/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1969913	1	12/11/22 21:04	12/11/22 21:04	ABL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1968197	1	12/04/22 20:56	12/06/22 06:22	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1969755	1	12/06/22 13:00	12/06/22 15:00	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1969809	1	12/07/22 09:00	12/07/22 11:40	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1973132	1	12/12/22 17:25	12/12/22 21:42	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1969599	5	12/06/22 17:16	12/07/22 15:15	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1969636	1	12/05/22 08:17	12/06/22 18:41	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1969580	1	12/05/22 08:17	12/05/22 19:05	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1970205	1	12/07/22 06:01	12/07/22 16:16	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1969710	1	12/06/22 05:47	12/06/22 13:53	DSH	Mt. Juliet, TN



20221202-OD11-EWALL (16') L1563669-02 Solid

Collected by
C. Mace

Collected date/time
12/02/22 12:00

Received date/time
12/03/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1969913	1	12/11/22 21:07	12/11/22 21:07	ABL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1968197	1	12/04/22 20:56	12/06/22 06:32	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1969755	1	12/06/22 13:00	12/06/22 15:00	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1969809	1	12/07/22 09:00	12/07/22 11:40	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1973132	1	12/12/22 17:25	12/12/22 21:45	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1969599	5	12/06/22 17:16	12/07/22 15:18	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1969636	1	12/05/22 08:17	12/06/22 19:04	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1969580	1	12/05/22 08:17	12/05/22 19:24	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1970205	1	12/07/22 06:01	12/08/22 11:25	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1969714	1	12/06/22 05:42	12/06/22 10:24	DSH	Mt. Juliet, TN

20221202-OD11-BASE (20') L1563669-03 Solid

Collected by
C. Mace

Collected date/time
12/02/22 12:00

Received date/time
12/03/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1969913	1	12/11/22 21:10	12/11/22 21:10	ABL	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG1968197	1	12/04/22 20:56	12/06/22 06:38	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1969755	1	12/06/22 13:00	12/06/22 15:00	KAD	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1969809	1	12/07/22 09:00	12/07/22 11:40	NTG	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG1973132	1	12/12/22 17:25	12/12/22 21:48	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1969599	5	12/06/22 17:16	12/07/22 15:21	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1969636	1	12/05/22 08:17	12/06/22 19:26	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1969580	1	12/05/22 08:17	12/05/22 19:44	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG1970205	1	12/07/22 06:01	12/07/22 16:01	KAP	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1969714	1	12/06/22 05:42	12/06/22 10:42	DSH	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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.624		1	12/11/2022 21:04	WG1969913

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	12/06/2022 06:22	WG1968197

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	8.54	T8		1	12/06/2022 15:00	WG1969755

Sample Narrative:

L1563669-01 WG1969755: 8.54 at 21C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	142		10.0	1	12/07/2022 11:40	WG1969809

Sample Narrative:

L1563669-01 WG1969809: at 25C

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

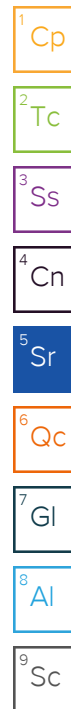
Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		0.200	1	12/12/2022 21:42	WG1973132

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	7.88		1.00	5	12/07/2022 15:15	WG1969599
Barium	331		2.50	5	12/07/2022 15:15	WG1969599
Cadmium	ND		1.00	5	12/07/2022 15:15	WG1969599
Copper	21.4		5.00	5	12/07/2022 15:15	WG1969599
Lead	9.72		2.00	5	12/07/2022 15:15	WG1969599
Nickel	24.7		2.50	5	12/07/2022 15:15	WG1969599
Selenium	ND		2.50	5	12/07/2022 15:15	WG1969599
Silver	ND		0.500	5	12/07/2022 15:15	WG1969599
Zinc	52.3		25.0	5	12/07/2022 15:15	WG1969599

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.04		0.100	1	12/06/2022 18:41	WG1969636
(S) a,a,a-Trifluorotoluene(FID)	97.3		77.0-120		12/06/2022 18:41	WG1969636



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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.0177		0.00100	1	12/05/2022 19:05	WG1969580
Toluene	0.0985		0.00500	1	12/05/2022 19:05	WG1969580
Ethylbenzene	0.0128		0.00250	1	12/05/2022 19:05	WG1969580
Xylenes, Total	0.211		0.00650	1	12/05/2022 19:05	WG1969580
1,2,4-Trimethylbenzene	0.0148		0.00500	1	12/05/2022 19:05	WG1969580
1,3,5-Trimethylbenzene	0.0139		0.00500	1	12/05/2022 19:05	WG1969580
(S) Toluene-d8	92.7		75.0-131		12/05/2022 19:05	WG1969580
(S) 4-Bromofluorobenzene	95.1		67.0-138		12/05/2022 19:05	WG1969580
(S) 1,2-Dichloroethane-d4	85.2		70.0-130		12/05/2022 19:05	WG1969580

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	8.03		4.00	1	12/07/2022 16:16	WG1970205
C28-C36 Motor Oil Range	63.9		4.00	1	12/07/2022 16:16	WG1970205
(S) o-Terphenyl	47.7		18.0-148		12/07/2022 16:16	WG1970205

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	12/06/2022 13:53	WG1969710
Anthracene	ND		0.00600	1	12/06/2022 13:53	WG1969710
Benzo(a)anthracene	ND		0.00600	1	12/06/2022 13:53	WG1969710
Benzo(b)fluoranthene	ND		0.00600	1	12/06/2022 13:53	WG1969710
Benzo(k)fluoranthene	ND		0.00600	1	12/06/2022 13:53	WG1969710
Benzo(a)pyrene	ND		0.00600	1	12/06/2022 13:53	WG1969710
Chrysene	ND		0.00600	1	12/06/2022 13:53	WG1969710
Dibenz(a,h)anthracene	ND		0.00600	1	12/06/2022 13:53	WG1969710
Fluoranthene	ND		0.00600	1	12/06/2022 13:53	WG1969710
Fluorene	ND		0.00600	1	12/06/2022 13:53	WG1969710
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	12/06/2022 13:53	WG1969710
1-Methylnaphthalene	ND		0.0200	1	12/06/2022 13:53	WG1969710
2-Methylnaphthalene	ND		0.0200	1	12/06/2022 13:53	WG1969710
Naphthalene	ND		0.0200	1	12/06/2022 13:53	WG1969710
Pyrene	ND		0.00600	1	12/06/2022 13:53	WG1969710
(S) p-Terphenyl-d14	65.7		23.0-120		12/06/2022 13:53	WG1969710
(S) Nitrobenzene-d5	54.4		14.0-149		12/06/2022 13:53	WG1969710
(S) 2-Fluorobiphenyl	62.3		34.0-125		12/06/2022 13:53	WG1969710

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.66		1	12/11/2022 21:07	WG1969913

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	12/06/2022 06:32	WG1968197

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	9.00	T8		1	12/06/2022 15:00	WG1969755

Sample Narrative:

L1563669-02 WG1969755: 9 at 20.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	289		10.0	1	12/07/2022 11:40	WG1969809

Sample Narrative:

L1563669-02 WG1969809: at 25C

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		0.200	1	12/12/2022 21:45	WG1973132

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	8.14		1.00	5	12/07/2022 15:18	WG1969599
Barium	347		2.50	5	12/07/2022 15:18	WG1969599
Cadmium	ND		1.00	5	12/07/2022 15:18	WG1969599
Copper	13.4		5.00	5	12/07/2022 15:18	WG1969599
Lead	8.05		2.00	5	12/07/2022 15:18	WG1969599
Nickel	13.8		2.50	5	12/07/2022 15:18	WG1969599
Selenium	ND		2.50	5	12/07/2022 15:18	WG1969599
Silver	ND		0.500	5	12/07/2022 15:18	WG1969599
Zinc	35.6		25.0	5	12/07/2022 15:18	WG1969599

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.707		0.100	1	12/06/2022 19:04	WG1969636
(S) a,a,a-Trifluorotoluene(FID)	100		77.0-120		12/06/2022 19:04	WG1969636

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	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00885		0.00100	1	12/05/2022 19:24	WG1969580
Toluene	0.0674		0.00500	1	12/05/2022 19:24	WG1969580
Ethylbenzene	0.00840		0.00250	1	12/05/2022 19:24	WG1969580
Xylenes, Total	0.188		0.00650	1	12/05/2022 19:24	WG1969580
1,2,4-Trimethylbenzene	0.0134		0.00500	1	12/05/2022 19:24	WG1969580
1,3,5-Trimethylbenzene	0.0147		0.00500	1	12/05/2022 19:24	WG1969580
(S) Toluene-d8	94.3		75.0-131		12/05/2022 19:24	WG1969580
(S) 4-Bromofluorobenzene	95.4		67.0-138		12/05/2022 19:24	WG1969580
(S) 1,2-Dichloroethane-d4	88.3		70.0-130		12/05/2022 19:24	WG1969580

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		4.00	1	12/08/2022 11:25	WG1970205
C28-C36 Motor Oil Range	17.6		4.00	1	12/08/2022 11:25	WG1970205
(S) o-Terphenyl	48.7		18.0-148		12/08/2022 11:25	WG1970205

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	12/06/2022 10:24	WG1969714
Anthracene	ND		0.00600	1	12/06/2022 10:24	WG1969714
Benzo(a)anthracene	ND		0.00600	1	12/06/2022 10:24	WG1969714
Benzo(b)fluoranthene	ND		0.00600	1	12/06/2022 10:24	WG1969714
Benzo(k)fluoranthene	ND		0.00600	1	12/06/2022 10:24	WG1969714
Benzo(a)pyrene	ND		0.00600	1	12/06/2022 10:24	WG1969714
Chrysene	ND		0.00600	1	12/06/2022 10:24	WG1969714
Dibenz(a,h)anthracene	ND		0.00600	1	12/06/2022 10:24	WG1969714
Fluoranthene	ND		0.00600	1	12/06/2022 10:24	WG1969714
Fluorene	ND		0.00600	1	12/06/2022 10:24	WG1969714
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	12/06/2022 10:24	WG1969714
1-Methylnaphthalene	ND		0.0200	1	12/06/2022 10:24	WG1969714
2-Methylnaphthalene	ND		0.0200	1	12/06/2022 10:24	WG1969714
Naphthalene	ND		0.0200	1	12/06/2022 10:24	WG1969714
Pyrene	ND		0.00600	1	12/06/2022 10:24	WG1969714
(S) p-Terphenyl-d14	71.0		23.0-120		12/06/2022 10:24	WG1969714
(S) Nitrobenzene-d5	70.2		14.0-149		12/06/2022 10:24	WG1969714
(S) 2-Fluorobiphenyl	63.2		34.0-125		12/06/2022 10:24	WG1969714

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.531		1	12/11/2022 21:10	WG1969913

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		1.00	1	12/06/2022 06:38	WG1968197

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	RDL	Dilution	Analysis date / time	Batch
pH	8.39	T8	1	12/06/2022 15:00	WG1969755	

Sample Narrative:

L1563669-03 WG1969755: 8.39 at 20.4C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	155		10.0	1	12/07/2022 11:40	WG1969809

Sample Narrative:

L1563669-03 WG1969809: at 25C

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

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	ND		0.200	1	12/12/2022 21:48	WG1973132

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.08		1.00	5	12/07/2022 15:21	WG1969599
Barium	292		2.50	5	12/07/2022 15:21	WG1969599
Cadmium	ND		1.00	5	12/07/2022 15:21	WG1969599
Copper	17.8		5.00	5	12/07/2022 15:21	WG1969599
Lead	6.32		2.00	5	12/07/2022 15:21	WG1969599
Nickel	23.1		2.50	5	12/07/2022 15:21	WG1969599
Selenium	ND		2.50	5	12/07/2022 15:21	WG1969599
Silver	ND		0.500	5	12/07/2022 15:21	WG1969599
Zinc	45.5		25.0	5	12/07/2022 15:21	WG1969599

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.810		0.100	1	12/06/2022 19:26	WG1969636
(S) a,a,a-Trifluorotoluene(FID)	98.6		77.0-120		12/06/2022 19:26	WG1969636

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	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00383		0.00100	1	12/05/2022 19:44	WG1969580
Toluene	0.0193		0.00500	1	12/05/2022 19:44	WG1969580
Ethylbenzene	0.00375		0.00250	1	12/05/2022 19:44	WG1969580
Xylenes, Total	0.0679		0.00650	1	12/05/2022 19:44	WG1969580
1,2,4-Trimethylbenzene	0.0143		0.00500	1	12/05/2022 19:44	WG1969580
1,3,5-Trimethylbenzene	0.0128		0.00500	1	12/05/2022 19:44	WG1969580
(S) Toluene-d8	93.9		75.0-131		12/05/2022 19:44	WG1969580
(S) 4-Bromofluorobenzene	98.1		67.0-138		12/05/2022 19:44	WG1969580
(S) 1,2-Dichloroethane-d4	83.4		70.0-130		12/05/2022 19:44	WG1969580

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	ND		4.00	1	12/07/2022 16:01	WG1970205
C28-C36 Motor Oil Range	15.0		4.00	1	12/07/2022 16:01	WG1970205
(S) o-Terphenyl	45.2		18.0-148		12/07/2022 16:01	WG1970205

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.00600	1	12/06/2022 10:42	WG1969714
Anthracene	ND		0.00600	1	12/06/2022 10:42	WG1969714
Benzo(a)anthracene	ND		0.00600	1	12/06/2022 10:42	WG1969714
Benzo(b)fluoranthene	ND		0.00600	1	12/06/2022 10:42	WG1969714
Benzo(k)fluoranthene	ND		0.00600	1	12/06/2022 10:42	WG1969714
Benzo(a)pyrene	ND		0.00600	1	12/06/2022 10:42	WG1969714
Chrysene	ND		0.00600	1	12/06/2022 10:42	WG1969714
Dibenz(a,h)anthracene	ND		0.00600	1	12/06/2022 10:42	WG1969714
Fluoranthene	ND		0.00600	1	12/06/2022 10:42	WG1969714
Fluorene	ND		0.00600	1	12/06/2022 10:42	WG1969714
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	12/06/2022 10:42	WG1969714
1-Methylnaphthalene	ND		0.0200	1	12/06/2022 10:42	WG1969714
2-Methylnaphthalene	ND		0.0200	1	12/06/2022 10:42	WG1969714
Naphthalene	ND		0.0200	1	12/06/2022 10:42	WG1969714
Pyrene	ND		0.00600	1	12/06/2022 10:42	WG1969714
(S) p-Terphenyl-d14	76.9		23.0-120		12/06/2022 10:42	WG1969714
(S) Nitrobenzene-d5	81.2		14.0-149		12/06/2022 10:42	WG1969714
(S) 2-Fluorobiphenyl	71.2		34.0-125		12/06/2022 10:42	WG1969714

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3868455-1 12/06/22 04:05

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

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1562306-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1562306-09 12/06/22 04:43 • (DUP) R3868455-7 12/06/22 04:49

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

L1563669-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1563669-01 12/06/22 06:22 • (DUP) R3868455-8 12/06/22 06:27

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

Laboratory Control Sample (LCS)

(LCS) R3868455-2 12/06/22 04:12

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

L1562306-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1562306-08 12/06/22 04:17 • (MS) R3868455-4 12/06/22 04:28 • (MSD) R3868455-5 12/06/22 04:33

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	ND	11.0	3.14	55.0	15.7	1	75.0-125	J6	J3 J6	111	20

Sample Narrative:

MS: Matrix spike failure due to matrix.

MSD: Matrix spike failure due to matrix.

L1562306-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1562306-08 12/06/22 04:17 • (MS) R3868455-6 12/06/22 04:38

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Hexavalent Chromium	638	ND	506	79.3	50	75.0-125	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1562598-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1562598-01 12/06/22 15:00 • (DUP) R3868756-2 12/06/22 15:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	7.14	7.12	1	0.281		1

Sample Narrative:
OS: 7.14 at 21C
DUP: 7.12 at 20.7C

L1563783-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1563783-02 12/06/22 15:00 • (DUP) R3868756-3 12/06/22 15:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	pH	su		%		%
pH	7.89	7.89	1	0.000		1

Sample Narrative:
OS: 7.89 at 20.3C
DUP: 7.89 at 20.3C

Laboratory Control Sample (LCS)

(LCS) R3868756-1 12/06/22 15:00

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

Sample Narrative:
LCS: 9.9 at 20C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3869102-1 12/07/22 11:40

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

L1562533-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1562533-05 12/07/22 11:40 • (DUP) R3869102-3 12/07/22 11:40

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	1330	1340	1	0.673		20

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

L1563669-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1563669-03 12/07/22 11:40 • (DUP) R3869102-4 12/07/22 11:40

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	155	155	1	0.452		20

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

Laboratory Control Sample (LCS)

(LCS) R3869102-2 12/07/22 11:40

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	1120	1090	97.5	85.0-115	

Sample Narrative:
LCS: at 25C

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3870931-1 12/12/22 20:55

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) R3870931-2 12/12/22 20:58 • (LCSD) R3870931-3 12/12/22 21:01

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	0.997	0.980	99.7	98.0	80.0-120			1.76	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3869269-1 12/07/22 14:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

Laboratory Control Sample (LCS)

(LCS) R3869269-2 12/07/22 14:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	90.1	90.1	80.0-120	
Barium	100	90.0	90.0	80.0-120	
Cadmium	100	94.5	94.5	80.0-120	
Copper	100	87.5	87.5	80.0-120	
Lead	100	89.8	89.8	80.0-120	
Nickel	100	92.4	92.4	80.0-120	
Selenium	100	97.8	97.8	80.0-120	
Silver	20.0	18.6	93.1	80.0-120	
Zinc	100	89.1	89.1	80.0-120	

7
Gl

8
Al

9
Sc

L1563224-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1563224-01 12/07/22 14:38 • (MS) R3869269-5 12/07/22 14:48 • (MSD) R3869269-6 12/07/22 14:52

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	ND	85.4	80.9	84.8	80.3	5	75.0-125			5.40	20
Barium	100	100	177	233	76.6	133	5	75.0-125		J3 J5	27.5	20
Cadmium	100	1.25	92.9	91.4	91.6	90.2	5	75.0-125			1.54	20
Copper	100	54.7	127	207	72.5	153	5	75.0-125	J6	J3 J5	47.9	20
Lead	100	28.0	116	145	88.3	117	5	75.0-125		J3	21.8	20
Nickel	100	ND	91.8	89.5	89.8	87.5	5	75.0-125			2.49	20
Selenium	100	ND	94.6	94.1	94.3	93.8	5	75.0-125			0.525	20
Silver	20.0	ND	18.2	17.6	90.8	88.0	5	75.0-125			3.13	20
Zinc	100	59.2	149	1060	89.7	999	5	75.0-125		J3 J5	151	20

Method Blank (MB)

(MB) R3870461-2 12/06/22 11:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0316	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	104			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3870461-1 12/06/22 10:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.78	105	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			108	77.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3868548-2 12/05/22 14:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	93.3			75.0-131
(S) 4-Bromofluorobenzene	94.8			67.0-138
(S) 1,2-Dichloroethane-d4	84.1			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3868548-1 12/05/22 13:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.133	106	70.0-123	
Toluene	0.125	0.116	92.8	75.0-121	
Ethylbenzene	0.125	0.117	93.6	74.0-126	
Xylenes, Total	0.375	0.353	94.1	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.122	97.6	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.120	96.0	73.0-127	
(S) Toluene-d8			92.3	75.0-131	
(S) 4-Bromofluorobenzene			99.1	67.0-138	
(S) 1,2-Dichloroethane-d4			94.6	70.0-130	

L1563554-73 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1563554-73 12/05/22 18:05 • (MS) R3868548-3 12/05/22 22:22 • (MSD) R3868548-4 12/05/22 22:42

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	0.124	ND	0.148	0.192	119	154	1	10.0-149		J5	25.9	37
Toluene	0.124	ND	0.132	0.171	106	138	1	10.0-156			25.7	38
Ethylbenzene	0.124	0.00322	0.126	0.167	99.0	132	1	10.0-160			28.0	38
Xylenes, Total	0.372	ND	0.381	0.487	102	130	1	10.0-160			24.4	38
1,2,4-Trimethylbenzene	0.124	ND	0.140	0.176	113	142	1	10.0-160			22.8	36
1,3,5-Trimethylbenzene	0.124	ND	0.141	0.178	114	144	1	10.0-160			23.2	38
(S) Toluene-d8					93.2	91.4		75.0-131				
(S) 4-Bromofluorobenzene					95.3	94.2		67.0-138				
(S) 1,2-Dichloroethane-d4					94.0	92.3		70.0-130				

1

Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Method Blank (MB)

(MB) R3869280-1 12/07/22 13:54

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	U		0.274	4.00
(S) o-Terphenyl	46.7			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3869280-2 12/07/22 14:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	29.1	58.2	50.0-150	
(S) o-Terphenyl			64.9	18.0-148	

L1563669-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1563669-01 12/07/22 16:16 • (MS) R3869280-3 12/07/22 16:30 • (MSD) R3869280-4 12/07/22 16:44

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	8.03	42.0	39.1	67.9	62.1	1	50.0-150			7.15	20
(S) o-Terphenyl					61.6	58.0		18.0-148				

1
Cp

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Tc

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Ss

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Cn

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Sr

6
Qc

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Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3868597-2 12/06/22 09:18

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	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
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	89.9			23.0-120
(S) Nitrobenzene-d5	72.9			14.0-149
(S) 2-Fluorobiphenyl	84.5			34.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3868597-1 12/06/22 08:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0720	90.0	50.0-120	
Anthracene	0.0800	0.0721	90.1	50.0-126	
Benzo(a)anthracene	0.0800	0.0774	96.8	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0775	96.9	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0761	95.1	49.0-125	
Benzo(a)pyrene	0.0800	0.0656	82.0	42.0-120	
Chrysene	0.0800	0.0827	103	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0743	92.9	47.0-125	
Fluoranthene	0.0800	0.0789	98.6	49.0-129	
Fluorene	0.0800	0.0768	96.0	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0752	94.0	46.0-125	
1-Methylnaphthalene	0.0800	0.0699	87.4	51.0-121	
2-Methylnaphthalene	0.0800	0.0691	86.4	50.0-120	
Naphthalene	0.0800	0.0696	87.0	50.0-120	
Pyrene	0.0800	0.0806	101	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3868597-1 12/06/22 08:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
(S) p-Terphenyl-d14			86.7	23.0-120	
(S) Nitrobenzene-d5			76.6	14.0-149	
(S) 2-Fluorobiphenyl			88.0	34.0-125	

L1563610-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1563610-03 12/06/22 11:55 • (MS) R3868597-3 12/06/22 12:15 • (MSD) R3868597-4 12/06/22 12:35

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acenaphthene	0.0800	ND	0.0701	0.0725	87.6	90.6	1	14.0-127			3.37	27
Anthracene	0.0800	ND	0.0661	0.0654	82.6	81.8	1	10.0-145			1.06	30
Benzo(a)anthracene	0.0800	ND	0.0684	0.0703	85.5	87.9	1	10.0-139			2.74	30
Benzo(b)fluoranthene	0.0800	ND	0.0768	0.0768	96.0	96.0	1	10.0-140			0.000	36
Benzo(k)fluoranthene	0.0800	ND	0.0765	0.0790	95.6	98.8	1	10.0-137			3.22	31
Benzo(a)pyrene	0.0800	ND	0.0786	0.0790	98.3	98.8	1	10.0-141			0.508	31
Chrysene	0.0800	ND	0.0821	0.0850	103	106	1	10.0-145			3.47	30
Dibenz(a,h)anthracene	0.0800	ND	0.0733	0.0741	91.6	92.6	1	10.0-132			1.09	31
Fluoranthene	0.0800	ND	0.0775	0.0784	96.9	98.0	1	10.0-153			1.15	33
Fluorene	0.0800	ND	0.0725	0.0752	90.6	94.0	1	11.0-130			3.66	29
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0702	0.0729	87.8	91.1	1	10.0-137			3.77	32
1-Methylnaphthalene	0.0800	ND	0.0704	0.0724	88.0	90.5	1	10.0-142			2.80	28
2-Methylnaphthalene	0.0800	ND	0.0671	0.0676	83.9	84.5	1	10.0-137			0.742	28
Naphthalene	0.0800	ND	0.0693	0.0702	86.6	87.8	1	10.0-135			1.29	27
Pyrene	0.0800	ND	0.0812	0.0827	102	103	1	10.0-148			1.83	35
(S) p-Terphenyl-d14					86.0	95.7		23.0-120				
(S) Nitrobenzene-d5					70.0	76.5		14.0-149				
(S) 2-Fluorobiphenyl					83.3	92.1		34.0-125				

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

Method Blank (MB)

(MB) R3869024-2 12/06/22 10:06

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	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
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	88.2			23.0-120
(S) Nitrobenzene-d5	79.9			14.0-149
(S) 2-Fluorobiphenyl	80.8			34.0-125

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3869024-1 12/06/22 09:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0665	83.1	50.0-120	
Anthracene	0.0800	0.0746	93.3	50.0-126	
Benzo(a)anthracene	0.0800	0.0860	108	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0729	91.1	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0705	88.1	49.0-125	
Benzo(a)pyrene	0.0800	0.0677	84.6	42.0-120	
Chrysene	0.0800	0.0799	99.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0742	92.8	47.0-125	
Fluoranthene	0.0800	0.0775	96.9	49.0-129	
Fluorene	0.0800	0.0733	91.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0810	101	46.0-125	
1-Methylnaphthalene	0.0800	0.0639	79.9	51.0-121	
2-Methylnaphthalene	0.0800	0.0669	83.6	50.0-120	
Naphthalene	0.0800	0.0621	77.6	50.0-120	
Pyrene	0.0800	0.0780	97.5	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R3869024-1 12/06/22 09:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
(S) p-Terphenyl-d14			79.4	23.0-120	
(S) Nitrobenzene-d5			91.0	14.0-149	
(S) 2-Fluorobiphenyl			80.0	34.0-125	

L1563743-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1563743-01 12/06/22 11:00 • (MS) R3869024-3 12/06/22 11:17 • (MSD) R3869024-4 12/06/22 11:35

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acenaphthene	0.0800	ND	0.0526	0.0599	65.8	74.9	1	14.0-127			13.0	27
Anthracene	0.0800	ND	0.0645	0.0667	80.6	83.4	1	10.0-145			3.35	30
Benzo(a)anthracene	0.0800	ND	0.0715	0.0717	89.4	89.6	1	10.0-139			0.279	30
Benzo(b)fluoranthene	0.0800	ND	0.0656	0.0671	82.0	83.9	1	10.0-140			2.26	36
Benzo(k)fluoranthene	0.0800	ND	0.0640	0.0670	80.0	83.8	1	10.0-137			4.58	31
Benzo(a)pyrene	0.0800	ND	0.0699	0.0717	87.4	89.6	1	10.0-141			2.54	31
Chrysene	0.0800	ND	0.0719	0.0736	89.9	92.0	1	10.0-145			2.34	30
Dibenz(a,h)anthracene	0.0800	ND	0.0657	0.0677	82.1	84.6	1	10.0-132			3.00	31
Fluoranthene	0.0800	ND	0.0637	0.0654	79.6	81.8	1	10.0-153			2.63	33
Fluorene	0.0800	ND	0.0592	0.0656	74.0	82.0	1	11.0-130			10.3	29
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0698	0.0716	87.3	89.5	1	10.0-137			2.55	32
1-Methylnaphthalene	0.0800	ND	0.0498	0.0548	62.3	68.5	1	10.0-142			9.56	28
2-Methylnaphthalene	0.0800	ND	0.0538	0.0580	57.9	63.2	1	10.0-137			7.51	28
Naphthalene	0.0800	ND	0.0496	0.0525	62.0	65.6	1	10.0-135			5.68	27
Pyrene	0.0800	ND	0.0685	0.0711	85.6	88.9	1	10.0-148			3.72	35
(S) p-Terphenyl-d14					66.3	76.6		23.0-120				
(S) Nitrobenzene-d5					87.8	89.9		14.0-149				
(S) 2-Fluorobiphenyl					62.4	77.1		34.0-125				

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.

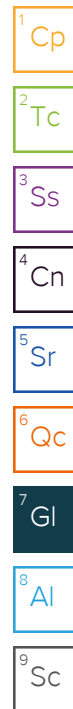
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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

J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
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.
T8	Sample(s) received past/too close to holding time expiration.



ACCREDITATIONS & LOCATIONS

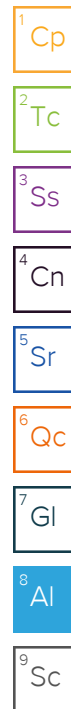
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	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.



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