

Caerus Oil and Gas

Sample Delivery Group: L1248588
Samples Received: 08/08/2020
Project Number: UNOCAL 4
Description: UNOCAL 4

Report To: Blair Rollins
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:

Chris Ward

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.



Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
20200807-UNOCAL4-BOT-30-950 L1248588-01	5
20200807-UNOCAL4-EWALL-12-1015 L1248588-02	7
Qc: Quality Control Summary	9
Wet Chemistry by Method 3060A/7196A	9
Wet Chemistry by Method 9045D	10
Wet Chemistry by Method 9050AMod	11
Mercury by Method 7471A	12
Metals (ICP) by Method 6010B	13
Metals (ICPMS) by Method 6020	14
Volatile Organic Compounds (GC) by Method 8015D/GRO	15
Volatile Organic Compounds (GC/MS) by Method 8260B	16
Semi-Volatile Organic Compounds (GC) by Method 8015	17
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	18
Gl: Glossary of Terms	20
Al: Accreditations & Locations	21
Sc: Sample Chain of Custody	22



SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



20200807-UNOCAL4-BOT-30-950 L1248588-01 Solid

Collected by
Chance Holder

Collected date/time
08/07/20 09:50

Received date/time
08/08/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1522983	1	08/11/20 23:16	08/11/20 23:16	CCE	Mt. Juliet, TN
Calculated Results	WG1525132	1	08/13/20 17:34	08/17/20 17:28	JIC	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1525751	1	08/17/20 09:00	08/17/20 17:28	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1526290	1	08/16/20 17:09	08/16/20 20:13	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1523027	1	08/09/20 21:00	08/10/20 05:00	KAB	Mt. Juliet, TN
Mercury by Method 7471A	WG1525148	1	08/13/20 07:25	08/13/20 19:34	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1525132	1	08/13/20 17:34	08/14/20 11:57	TRB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1525123	5	08/13/20 17:20	08/13/20 23:44	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1525975	1000	08/13/20 18:53	08/14/20 20:03	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1525740	80	08/13/20 18:53	08/14/20 11:59	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1526374	10	08/15/20 02:57	08/18/20 17:56	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1526224	1	08/14/20 18:51	08/15/20 11:04	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1526224	20	08/14/20 18:51	08/16/20 16:19	DMG	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

20200807-UNOCAL4-EWALL-12-1015 L1248588-02 Solid

Collected by
Chance Holder

Collected date/time
08/07/20 10:15

Received date/time
08/08/20 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1522983	1	08/11/20 23:19	08/11/20 23:19	CCE	Mt. Juliet, TN
Calculated Results	WG1525132	1	08/13/20 17:34	08/17/20 17:29	JIC	Mt. Juliet, TN
Wet Chemistry by Method 3060A/7196A	WG1525751	1	08/17/20 09:00	08/17/20 17:29	JIC	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1526290	1	08/16/20 17:09	08/16/20 20:13	KPS	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1523027	1	08/09/20 21:00	08/10/20 05:00	KAB	Mt. Juliet, TN
Mercury by Method 7471A	WG1525148	1	08/13/20 07:25	08/13/20 19:37	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1525132	1	08/13/20 17:34	08/14/20 11:40	TRB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1525123	5	08/13/20 17:20	08/13/20 22:48	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1525975	1	08/13/20 18:53	08/14/20 16:43	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1525740	1	08/13/20 18:53	08/13/20 23:41	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1526374	1	08/15/20 02:57	08/16/20 20:06	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1526224	1	08/14/20 18:51	08/15/20 11:21	DMG	Mt. Juliet, TN



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	39.9		1	08/11/2020 23:16	WG1522983

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	6.64		1.00	1	08/17/2020 17:28	WG1525132

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	ND		2.00	1	08/17/2020 17:28	WG1525751

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.71	T8	1	08/16/2020 20:13	WG1526290

Sample Narrative:

L1248588-01 WG1526290: 8.71 at 22.6C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	4070		10.0	1	08/10/2020 05:00	WG1523027

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	08/13/2020 19:34	WG1525148

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	191		0.500	1	08/14/2020 11:57	WG1525132
Cadmium	ND		0.500	1	08/14/2020 11:57	WG1525132
Chromium	6.64		1.00	1	08/14/2020 11:57	WG1525132
Copper	13.4		2.00	1	08/14/2020 11:57	WG1525132
Lead	11.9		0.500	1	08/14/2020 11:57	WG1525132
Nickel	17.0		2.00	1	08/14/2020 11:57	WG1525132
Selenium	ND		2.00	1	08/14/2020 11:57	WG1525132
Silver	ND		1.00	1	08/14/2020 11:57	WG1525132
Zinc	54.9		5.00	1	08/14/2020 11:57	WG1525132

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	9.76		1.00	5	08/13/2020 23:44	WG1525123

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	3860		100	1000	08/14/2020 20:03	WG1525975



Collected date/time: 08/07/20 09:50

L1248588

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	92.8		77.0-120		08/14/2020 20:03	WG1525975

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	0.132		0.0800	80	08/14/2020 11:59	WG1525740
Toluene	23.3	J5	0.400	80	08/14/2020 11:59	WG1525740
Ethylbenzene	7.03	J5	0.200	80	08/14/2020 11:59	WG1525740
Total Xylenes	107	J5	0.520	80	08/14/2020 11:59	WG1525740
(S) Toluene-d8	104		75.0-131		08/14/2020 11:59	WG1525740
(S) 4-Bromofluorobenzene	101		67.0-138		08/14/2020 11:59	WG1525740
(S) 1,2-Dichloroethane-d4	109		70.0-130		08/14/2020 11:59	WG1525740

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	3170		40.0	10	08/18/2020 17:56	WG1526374
(S) o-Terphenyl	127		18.0-148		08/18/2020 17:56	WG1526374

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	08/15/2020 11:04	WG1526224
Acenaphthene	0.0675		0.00600	1	08/15/2020 11:04	WG1526224
Acenaphthylene	ND		0.00600	1	08/15/2020 11:04	WG1526224
Benzo(a)anthracene	ND		0.00600	1	08/15/2020 11:04	WG1526224
Benzo(a)pyrene	ND		0.00600	1	08/15/2020 11:04	WG1526224
Benzo(b)fluoranthene	ND		0.00600	1	08/15/2020 11:04	WG1526224
Benzo(g,h,i)perylene	ND		0.00600	1	08/15/2020 11:04	WG1526224
Benzo(k)fluoranthene	ND		0.00600	1	08/15/2020 11:04	WG1526224
Chrysene	ND		0.00600	1	08/15/2020 11:04	WG1526224
Dibenz(a,h)anthracene	ND		0.00600	1	08/15/2020 11:04	WG1526224
Fluoranthene	ND		0.00600	1	08/15/2020 11:04	WG1526224
Fluorene	0.163		0.00600	1	08/15/2020 11:04	WG1526224
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/15/2020 11:04	WG1526224
Naphthalene	3.05		0.400	20	08/16/2020 16:19	WG1526224
Phenanthrene	0.149		0.00600	1	08/15/2020 11:04	WG1526224
Pyrene	ND		0.00600	1	08/15/2020 11:04	WG1526224
1-Methylnaphthalene	2.98		0.0200	1	08/15/2020 11:04	WG1526224
2-Methylnaphthalene	5.23		0.400	20	08/16/2020 16:19	WG1526224
2-Chloronaphthalene	ND		0.0200	1	08/15/2020 11:04	WG1526224
(S) p-Terphenyl-d14	84.8		23.0-120		08/15/2020 11:04	WG1526224
(S) p-Terphenyl-d14	81.6	J7	23.0-120		08/16/2020 16:19	WG1526224
(S) Nitrobenzene-d5	0.000	J7	14.0-149		08/16/2020 16:19	WG1526224
(S) Nitrobenzene-d5	1780	J1	14.0-149		08/15/2020 11:04	WG1526224
(S) 2-Fluorobiphenyl	96.6	J7	34.0-125		08/16/2020 16:19	WG1526224
(S) 2-Fluorobiphenyl	92.9		34.0-125		08/15/2020 11:04	WG1526224

Sample Narrative:

L1248588-01 WG1526224: Surrogate failure due to matrix interference



Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	0.711		1	08/11/2020 23:19	WG1522983

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Calculated Results

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Trivalent	15.5		2.00	1	08/17/2020 17:29	WG1525132

Wet Chemistry by Method 3060A/7196A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Chromium, Hexavalent	ND		2.00	1	08/17/2020 17:29	WG1525751

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	8.60	T8	1	08/16/2020 20:13	WG1526290

Sample Narrative:

L1248588-02 WG1526290: 8.6 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result umhos/cm	Qualifier	RDL umhos/cm	Dilution	Analysis date / time	Batch
Specific Conductance	340		10.0	1	08/10/2020 05:00	WG1523027

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0400	1	08/13/2020 19:37	WG1525148

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Barium	268	Q1	0.500	1	08/14/2020 11:40	WG1525132
Cadmium	ND		0.500	1	08/14/2020 11:40	WG1525132
Chromium	15.8	Q1	1.00	1	08/14/2020 11:40	WG1525132
Copper	17.6		2.00	1	08/14/2020 11:40	WG1525132
Lead	17.0		0.500	1	08/14/2020 11:40	WG1525132
Nickel	16.3		2.00	1	08/14/2020 11:40	WG1525132
Selenium	ND		2.00	1	08/14/2020 11:40	WG1525132
Silver	ND	Q1	1.00	1	08/14/2020 11:40	WG1525132
Zinc	46.2	Q1	5.00	1	08/14/2020 11:40	WG1525132

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	15.8		1.00	5	08/13/2020 22:48	WG1525123

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	0.204	B	0.100	1	08/14/2020 16:43	WG1525975



Collected date/time: 08/07/20 10:15

L1248588

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
(S) a,a,a-Trifluorotoluene(FID)	94.6		77.0-120		08/14/2020 16:43	WG1525975

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	ND		0.00100	1	08/13/2020 23:41	WG1525740
Toluene	ND		0.00500	1	08/13/2020 23:41	WG1525740
Ethylbenzene	ND		0.00250	1	08/13/2020 23:41	WG1525740
Total Xylenes	ND		0.00650	1	08/13/2020 23:41	WG1525740
(S) Toluene-d8	101		75.0-131		08/13/2020 23:41	WG1525740
(S) 4-Bromofluorobenzene	105		67.0-138		08/13/2020 23:41	WG1525740
(S) 1,2-Dichloroethane-d4	115		70.0-130		08/13/2020 23:41	WG1525740

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	60.0		4.00	1	08/16/2020 20:06	WG1526374
(S) o-Terphenyl	88.6		18.0-148		08/16/2020 20:06	WG1526374

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Acenaphthene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Acenaphthylene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Benzo(a)anthracene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Benzo(a)pyrene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Benzo(b)fluoranthene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Benzo(g,h,i)perylene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Benzo(k)fluoranthene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Chrysene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Dibenz(a,h)anthracene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Fluoranthene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Fluorene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Naphthalene	ND		0.0200	1	08/15/2020 11:21	WG1526224
Phenanthrene	ND		0.00600	1	08/15/2020 11:21	WG1526224
Pyrene	ND		0.00600	1	08/15/2020 11:21	WG1526224
1-Methylnaphthalene	ND		0.0200	1	08/15/2020 11:21	WG1526224
2-Methylnaphthalene	ND		0.0200	1	08/15/2020 11:21	WG1526224
2-Chloronaphthalene	ND		0.0200	1	08/15/2020 11:21	WG1526224
(S) p-Terphenyl-d14	90.1		23.0-120		08/15/2020 11:21	WG1526224
(S) Nitrobenzene-d5	104		14.0-149		08/15/2020 11:21	WG1526224
(S) 2-Fluorobiphenyl	87.4		34.0-125		08/15/2020 11:21	WG1526224



Method Blank (MB)

(MB) R3560783-1 08/17/20 17:27

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chromium,Hexavalent	U		0.640	2.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1248588-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1248588-02 08/17/20 17:29 • (DUP) R3560783-3 08/17/20 17:29

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

L1249526-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1249526-02 08/17/20 18:00 • (DUP) R3560783-8 08/17/20 18:00

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

Laboratory Control Sample (LCS)

(LCS) R3560783-2 08/17/20 17:27

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chromium,Hexavalent	24.0	25.2	105	80.0-120	

L1249095-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1249095-06 08/17/20 17:39 • (MS) R3560783-4 08/17/20 17:40 • (MSD) R3560783-5 08/17/20 17:40

	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	%	%		%			%	%
Chromium,Hexavalent	20.0	ND	3.04	3.08	15.2	15.4	1	75.0-125	J6	J6	1.31	20

Sample Narrative:

OS: sample is a reducer

L1248588-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1248588-01 08/16/20 20:13 • (DUP) R3560340-2 08/16/20 20:13

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.71	8.67	1	0.460		1

Sample Narrative:
OS: 8.71 at 22.6C
DUP: 8.67 at 22.3C

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1248971-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1248971-02 08/16/20 20:13 • (DUP) R3560340-4 08/16/20 20:13

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	su	su		%		%
pH	8.35	8.42	1	0.835		1

Sample Narrative:
OS: 8.35 at 22.1C
DUP: 8.42 at 22.2C

Laboratory Control Sample (LCS)

(LCS) R3560340-1 08/16/20 20:13

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	su	su	%	%	
pH	10.0	10.1	101	99.0-101	

Sample Narrative:
LCS: 10.06 at 22.2C

Method Blank (MB)

(MB) R3558329-1 08/10/20 05:00				
	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	umhos/cm		umhos/cm	umhos/cm
Specific Conductance	U		10.0	10.0

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3558203-4 08/10/20 05:00						
	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte		umhos/cm		%		%
Specific Conductance		329	1	3.29		20

L1248588-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1248588-01 08/10/20 05:00 • (DUP) R3558329-3 08/10/20 05:00						
	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	umhos/cm	umhos/cm		%		%
Specific Conductance	4070	3930	1	3.50		20

L1248588-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1248588-02 08/10/20 05:00 • (DUP) R3558329-4 08/10/20 05:00						
	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	umhos/cm	umhos/cm		%		%
Specific Conductance	340	329	1	3.29		20

Laboratory Control Sample (LCS)

(LCS) R3558329-2 08/10/20 05:00					
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	umhos/cm	umhos/cm	%	%	
Specific Conductance	483	481	99.6	85.0-115	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3559636-1 08/13/20 19:09

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.0180	0.0400

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Laboratory Control Sample (LCS)

(LCS) R3559636-2 08/13/20 19:11

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.480	96.0	80.0-120	

L1248587-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1248587-06 08/13/20 19:14 • (MS) R3559636-3 08/13/20 19:21 • (MSD) R3559636-4 08/13/20 19:24

	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	%	%		%			%	%
Mercury	0.500	ND	0.473	0.462	94.6	92.4	1	75.0-125			2.36	20



Method Blank (MB)

(MB) R3559860-1 08/14/20 11:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	U		0.240	0.500
Cadmium	U		0.0810	0.500
Chromium	U		0.250	1.00
Copper	U		0.506	2.00
Lead	U		0.208	0.500
Nickel	U		0.490	2.00
Selenium	U		0.617	2.00
Silver	U		0.228	1.00
Zinc	U		0.939	5.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3559860-2 08/14/20 11:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	103	103	80.0-120	
Cadmium	100	98.6	98.6	80.0-120	
Chromium	100	99.5	99.5	80.0-120	
Copper	100	102	102	80.0-120	
Lead	100	101	101	80.0-120	
Nickel	100	102	102	80.0-120	
Selenium	100	97.3	97.3	80.0-120	
Silver	20.0	18.5	92.6	80.0-120	
Zinc	100	98.8	98.8	80.0-120	

L1248588-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1248588-02 08/14/20 11:40 • (MS) R3559860-5 08/14/20 11:49 • (MSD) R3559860-6 08/14/20 11:52

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 %
Barium	100	268	354	380	85.7	111	1	75.0-125			7.02	20
Cadmium	100	ND	91.9	87.3	91.5	87.0	1	75.0-125			5.10	20
Chromium	100	15.8	101	95.7	85.4	79.9	1	75.0-125			5.64	20
Copper	100	17.6	115	106	97.0	88.8	1	75.0-125			7.46	20
Lead	100	17.0	111	108	93.7	90.7	1	75.0-125			2.76	20
Nickel	100	16.3	113	106	96.8	89.6	1	75.0-125			6.63	20
Selenium	100	ND	89.9	83.4	89.9	83.4	1	75.0-125			7.50	20
Silver	20.0	ND	17.0	16.0	84.9	80.1	1	75.0-125			5.74	20
Zinc	100	46.2	133	133	87.2	86.8	1	75.0-125			0.300	20



Method Blank (MB)

(MB) R3559653-1 08/13/20 22:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.422	1.00

Laboratory Control Sample (LCS)

(LCS) R3559653-2 08/13/20 22:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	96.2	96.2	80.0-120	

L1248588-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1248588-02 08/13/20 22:48 • (MS) R3559653-5 08/13/20 22:57 • (MSD) R3559653-6 08/13/20 23:01

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	20.0	15.8	98.8	105	83.0	89.2	5	75.0-125			6.13	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3560159-2 08/14/20 11:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0223	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	100			77.0-120

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Laboratory Control Sample (LCS)

(LCS) R3560159-1 08/14/20 10:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.78	123	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			102	77.0-120	

L1248523-42 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1248523-42 08/14/20 18:34 • (MS) R3560159-3 08/14/20 20:48 • (MSD) R3560159-4 08/14/20 21:10

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	550	260	845	825	106	103	100	10.0-151			2.40	28
(S) a,a,a-Trifluorotoluene(FID)					100	101		77.0-120				



Method Blank (MB)

(MB) R3559908-2 08/13/20 18:34

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
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	103			75.0-131
(S) 4-Bromofluorobenzene	98.3			67.0-138
(S) 1,2-Dichloroethane-d4	111			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3559908-1 08/13/20 17:37 • (LCSD) R3559908-3 08/14/20 09:01

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	0.102	0.119	81.6	95.2	70.0-123			15.4	20
Ethylbenzene	0.125	0.110	0.115	88.0	92.0	74.0-126			4.44	20
Toluene	0.125	0.105	0.122	84.0	97.6	75.0-121			15.0	20
Xylenes, Total	0.375	0.324	0.346	86.4	92.3	72.0-127			6.57	20
(S) Toluene-d8				102	103	75.0-131				
(S) 4-Bromofluorobenzene				97.3	92.4	67.0-138				
(S) 1,2-Dichloroethane-d4				107	112	70.0-130				

L1248588-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1248588-01 08/14/20 11:59 • (MS) R3559908-4 08/14/20 12:18 • (MSD) R3559908-5 08/14/20 12:37

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	10.0	0.132	13.0	12.8	129	127	80	10.0-149			1.55	37
Ethylbenzene	10.0	7.03	22.8	23.9	158	169	80	10.0-160		J5	4.71	38
Toluene	10.0	23.3	51.1	56.3	278	330	80	10.0-156	J5	J5	9.68	38
Xylenes, Total	30.0	107	205	223	327	387	80	10.0-160	J5	J5	8.41	38
(S) Toluene-d8					94.5	96.3		75.0-131				
(S) 4-Bromofluorobenzene					109	104		67.0-138				
(S) 1,2-Dichloroethane-d4					120	120		70.0-130				

Method Blank (MB)

(MB) R3560397-1 08/16/20 16:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) High Fraction	U		0.769	4.00
(S) o-Terphenyl	99.7			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3560397-2 08/16/20 17:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	50.0	45.1	90.2	50.0-150	
(S) o-Terphenyl			99.4	18.0-148	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3560211-2 08/15/20 07:04

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	98.1			14.0-149
(S) 2-Fluorobiphenyl	96.5			34.0-125
(S) p-Terphenyl-d14	106			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3560211-1 08/15/20 06:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0718	89.8	50.0-126	
Acenaphthene	0.0800	0.0746	93.3	50.0-120	
Acenaphthylene	0.0800	0.0762	95.3	50.0-120	
Benzo(a)anthracene	0.0800	0.0781	97.6	45.0-120	
Benzo(a)pyrene	0.0800	0.0671	83.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0729	91.1	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0760	95.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0737	92.1	49.0-125	
Chrysene	0.0800	0.0749	93.6	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0741	92.6	47.0-125	
Fluoranthene	0.0800	0.0762	95.3	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3560211-1 08/15/20 06:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0771	96.4	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0735	91.9	46.0-125	
Naphthalene	0.0800	0.0727	90.9	50.0-120	
Phenanthrene	0.0800	0.0754	94.3	47.0-120	
Pyrene	0.0800	0.0753	94.1	43.0-123	
1-Methylnaphthalene	0.0800	0.0767	95.9	51.0-121	
2-Methylnaphthalene	0.0800	0.0726	90.8	50.0-120	
2-Chloronaphthalene	0.0800	0.0766	95.8	50.0-120	
(S) Nitrobenzene-d5			97.1	14.0-149	
(S) 2-Fluorobiphenyl			94.0	34.0-125	
(S) p-Terphenyl-d14			97.1	23.0-120	

L1248587-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1248587-04 08/15/20 09:55 • (MS) R3560211-3 08/15/20 10:12 • (MSD) R3560211-4 08/15/20 10:29

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 %
Anthracene	0.0796	0.00923	0.0888	0.0760	100	83.9	1	10.0-145			15.5	30
Acenaphthene	0.0796	ND	0.0747	0.0678	88.3	79.6	1	14.0-127			9.68	27
Acenaphthylene	0.0796	ND	0.0795	0.0747	93.3	87.2	1	21.0-124			6.23	25
Benzo(a)anthracene	0.0796	0.0642	0.168	0.136	130	90.2	1	10.0-139			21.1	30
Benzo(a)pyrene	0.0796	0.0571	0.145	0.119	110	77.8	1	10.0-141			19.7	31
Benzo(b)fluoranthene	0.0796	0.0824	0.171	0.142	111	74.9	1	10.0-140			18.5	36
Benzo(g,h,i)perylene	0.0796	0.0453	0.123	0.106	97.6	76.3	1	10.0-140			14.8	33
Benzo(k)fluoranthene	0.0796	0.0285	0.106	0.0896	97.4	76.8	1	10.0-137			16.8	31
Chrysene	0.0796	0.0591	0.181	0.139	153	100	1	10.0-145	J5		26.2	30
Dibenz(a,h)anthracene	0.0796	0.00916	0.0744	0.0665	82.0	72.0	1	10.0-132			11.2	31
Fluoranthene	0.0796	0.132	0.286	0.210	193	98.0	1	10.0-153	J5		30.6	33
Fluorene	0.0796	ND	0.0774	0.0700	92.2	83.0	1	11.0-130			10.0	29
Indeno(1,2,3-cd)pyrene	0.0796	0.0482	0.133	0.114	107	82.7	1	10.0-137			15.4	32
Naphthalene	0.0796	ND	0.0694	0.0657	87.2	82.5	1	10.0-135			5.48	27
Phenanthrene	0.0796	0.0645	0.179	0.130	144	82.3	1	10.0-144		J3	31.7	31
Pyrene	0.0796	0.104	0.218	0.166	143	77.9	1	10.0-148			27.1	35
1-Methylnaphthalene	0.0796	ND	0.0737	0.0682	92.6	85.7	1	10.0-142			7.75	28
2-Methylnaphthalene	0.0796	ND	0.0697	0.0659	87.6	82.8	1	10.0-137			5.60	28
2-Chloronaphthalene	0.0796	ND	0.0699	0.0652	87.8	81.9	1	29.0-120			6.96	24
(S) Nitrobenzene-d5					93.4	88.0		14.0-149				
(S) 2-Fluorobiphenyl					87.2	83.1		34.0-125				
(S) p-Terphenyl-d14					82.8	78.2		23.0-120				

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



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.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper 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.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
T8	Sample(s) received past/too close to holding time expiration.

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



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* 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 National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	n/a
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}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

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

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



