



**Nicholson GeoSolutions, LLC**

3433 East Lake Drive  
Centennial, CO 80121

March 11, 2019

Mr. Don Wilbourn  
Berry Petroleum Company  
235 Callahan Avenue  
Parachute, Colorado 81635

**Subject: O-29 Well Pad Soil Investigation**

Dear Don:

Nicholson GeoSolutions LLC was retained by Berry Petroleum Company (Berry) to conduct soil sampling at the site of a produced water leak on the O-29 well pad in the Garden Gulch area, Garfield County, Colorado. A leak of approximately 3-4 barrels of produced water occurred on the well pad on or about February 15th, 2019. Upon discovery of the leak, an excavation contractor was immediately mobilized to the site by Berry to begin cleanup. The leak was contained on frozen ground between the injection well buildings and the water storage pit on the well pad.

Nicholson GeoSolutions inspected the site on February 20<sup>th</sup>, 2019. A backhoe was used to collect two discrete surficial soil samples (0-4") from the surface of the well pad to evaluate compliance with the Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 standards (samples O29-S-1 and O29-S-2). The samples were analyzed for Total Volatile Petroleum Hydrocarbons (TVPH – gasoline range), Total Extractable Petroleum Hydrocarbons (TEPH – diesel and motor oil range), BTEX (benzene, toluene, ethylbenzene, and xylenes), sodium adsorption ratio (SAR), pH, and conductivity. Figure 1 shows the approximate extent of the spill and the locations of the soil samples collected.

Table 1 provides analytical results for the two samples. The laboratory analytical report is contained in Appendix A. All parameters for the two samples were below the Table 910-1 standards, except for pH for both samples at 12.9 and 9.94 standard units.

The spill site is located on an active injection well pad. During final reclamation of this site, any soils with pH, SAR, and EC levels above the Table 910-1 standards shall be remediated or buried under a minimum of three feet of clean fill to allow for successful reclamation. Therefore, in accordance with the COGCC 2008 FAQ #32, the operator requests temporary relief from the Table 910-1 standard for pH until final reclamation of the site is conducted.

Nicholson GeoSolutions LLC



David K. Nicholson, P.G.  
Principal Geologist

**Table 1 O-29 Soil Sample Results – February 20, 2019**

Parameter	Table 910-1 Standards	O29-S-1	O29-S-2
sp. conductance (mmhos/cm)	<4	0.543	0.817
pH (standard units)	6-9	<b>12.9</b>	<b>9.94</b>
SAR (ratio)	<12	1.93	3.54
TVPH – gasoline range	500 <sup>1</sup>	0.392	0.447
TEPH – diesel/motor oil range		84.1	75.6
benzene	0.17	0.00187	0.0156
toluene	85	<0.005	0.0231
ethylbenzene	100	<0.0005	0.00149
xylenes	175	0.00647	0.0158

<sup>1</sup>The standard is 500 for the combined total of TVPH and TEPH  
All units in mg/kg except where indicated



Figure 1

February  
2019



**Legend**

- Sampe Location
- Approximate Extent of Spill

0 40 80 160 Feet 1" = 60'

**Berry Petroleum Company**

O-29  
Spill Response

**APPENDIX A**  
**Laboratory Report**

March 04, 2019

## Berry Petroleum - Denver, CO

Sample Delivery Group: L1072796

Samples Received: 02/22/2019

Project Number:

Description:

Report To: Dave Nicholson  
1999 Broadway, Suite 3700  
Denver, CO 93309

Entire Report Reviewed By:



Mark W. Beasley  
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 National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	<b>2</b> Tc
<b>Ss: Sample Summary</b>	<b>3</b>	<b>3</b> Ss
<b>Cn: Case Narrative</b>	<b>4</b>	<b>4</b> Cn
<b>Sr: Sample Results</b>	<b>5</b>	<b>5</b> Sr
029-S-1 L1072796-01	<b>5</b>	
029-S-2 L1072796-02	<b>6</b>	
<b>Qc: Quality Control Summary</b>	<b>7</b>	<b>6</b> Qc
Wet Chemistry by Method 9045D	<b>7</b>	
Wet Chemistry by Method 9050AMod	<b>8</b>	
Volatile Organic Compounds (GC) by Method 8015/8021	<b>9</b>	<b>7</b> Gl
Semi-Volatile Organic Compounds (GC) by Method 8015	<b>11</b>	
<b>Gl: Glossary of Terms</b>	<b>12</b>	<b>8</b> Al
<b>Al: Accreditations &amp; Locations</b>	<b>13</b>	
<b>Sc: Sample Chain of Custody</b>	<b>14</b>	<b>9</b> Sc

# SAMPLE SUMMARY

## 029-S-1 L1072796-01 Solid

Collected by: DK Nicholson  
 Collected date/time: 02/20/19 09:10  
 Received date/time: 02/22/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1241186	1	02/26/19 11:39	02/26/19 11:39	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1241339	1	02/24/19 10:50	02/24/19 13:14	TH	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1241645	1	02/25/19 09:00	02/25/19 10:55	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1241937	1	02/23/19 21:24	02/26/19 00:30	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1241541	5	02/26/19 12:08	02/27/19 03:04	KME	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

## 029-S-2 L1072796-02 Solid

Collected by: DK Nicholson  
 Collected date/time: 02/20/19 09:20  
 Received date/time: 02/22/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG1241186	1	02/26/19 11:42	02/26/19 11:42	CCE	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1241339	1	02/24/19 10:50	02/24/19 13:14	TH	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG1241645	1	02/25/19 09:00	02/25/19 10:55	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015/8021	WG1241937	1	02/23/19 21:24	02/26/19 00:51	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1241541	1	02/26/19 12:08	03/04/19 14:19	KME	Mt. Juliet, TN

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc



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.

Mark W. Beasley  
Project Manager

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



## Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.93		1	02/26/2019 11:39	WG1241186

## Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	12.9	<u>T8</u>	1	02/24/2019 13:14	<a href="#">WG1241339</a>

## Sample Narrative:

L1072796-01 WG1241339: 12.85 at 18.5C

## Wet Chemistry by Method 9050AMod

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	543		10.0	1	02/25/2019 10:55	<a href="#">WG1241645</a>

## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	0.00187		0.000500	1	02/26/2019 00:30	<a href="#">WG1241937</a>
Toluene	ND		0.00500	1	02/26/2019 00:30	<a href="#">WG1241937</a>
Ethylbenzene	ND		0.000500	1	02/26/2019 00:30	<a href="#">WG1241937</a>
Total Xylene	0.00647		0.00150	1	02/26/2019 00:30	<a href="#">WG1241937</a>
TPH (GC/FID) Low Fraction	0.392		0.100	1	02/26/2019 00:30	<a href="#">WG1241937</a>
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	90.8		77.0-120		02/26/2019 00:30	<a href="#">WG1241937</a>
(S) <i>a,a,a</i> -Trifluorotoluene(PID)	92.4		72.0-128		02/26/2019 00:30	<a href="#">WG1241937</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	29.5		20.0	5	02/27/2019 03:04	<a href="#">WG1241541</a>
C28-C40 Oil Range	54.6		20.0	5	02/27/2019 03:04	<a href="#">WG1241541</a>
(S) <i>o</i> -Terphenyl	80.2		18.0-148		02/27/2019 03:04	<a href="#">WG1241541</a>

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	3.54		1	02/26/2019 11:42	WG1241186

## Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	9.94	<u>T8</u>	1	02/24/2019 13:14	<a href="#">WG1241339</a>

## Sample Narrative:

L1072796-02 WG1241339: 9.94 at 18.8C

## Wet Chemistry by Method 9050AMod

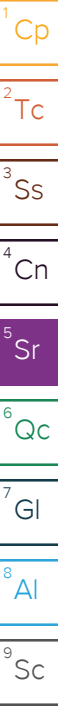
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	817		umhos/cm 10.0	1	02/25/2019 10:55	<a href="#">WG1241645</a>

## Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Benzene	0.0156		mg/kg 0.000500	1	02/26/2019 00:51	<a href="#">WG1241937</a>
Toluene	0.0231		0.00500	1	02/26/2019 00:51	<a href="#">WG1241937</a>
Ethylbenzene	0.00149		0.000500	1	02/26/2019 00:51	<a href="#">WG1241937</a>
Total Xylene	0.0158		0.00150	1	02/26/2019 00:51	<a href="#">WG1241937</a>
TPH (GC/FID) Low Fraction	0.447		0.100	1	02/26/2019 00:51	<a href="#">WG1241937</a>
(S) a,a,a-Trifluorotoluene(FID)	87.2		77.0-120		02/26/2019 00:51	<a href="#">WG1241937</a>
(S) a,a,a-Trifluorotoluene(PID)	89.1		72.0-128		02/26/2019 00:51	<a href="#">WG1241937</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	31.7		mg/kg 4.00	1	03/04/2019 14:19	<a href="#">WG1241541</a>
C28-C40 Oil Range	43.9		4.00	1	03/04/2019 14:19	<a href="#">WG1241541</a>
(S) o-Terphenyl	89.7		18.0-148		03/04/2019 14:19	<a href="#">WG1241541</a>





L1072654-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1072654-02 02/24/19 13:14 • (DUP) R3386958-2 02/24/19 13:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	9.00	10.6	1	16.3	J3	1

Sample Narrative:

OS: 9 at 18.7C  
DUP: 10.6 at 19.4C

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

L1073021-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1073021-01 02/24/19 13:14 • (DUP) R3386958-3 02/24/19 13:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	6.20	6.21	1	0.161		1

Sample Narrative:

OS: 6.2 at 18.7C  
DUP: 6.21 at 18.8C

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3386958-1 02/24/19 13:14

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.01 at 20.3C



Method Blank (MB)

(MB) R3386600-1 02/25/19 10:55

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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

L1072795-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1072795-01 02/25/19 10:55 • (DUP) R3386600-3 02/25/19 10:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Specific Conductance	3290	3260	1	0.916		20

<sup>4</sup>Cn

<sup>5</sup>Sr

Laboratory Control Sample (LCS)

(LCS) R3386600-2 02/25/19 10:55

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Specific Conductance	877	887	101	90.0-110	

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc



Method Blank (MB)

(MB) R3386961-5 02/25/19 13:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	0.000206	J	0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	95.2			77.0-120
(S) a,a,a-Trifluorotoluene(PID)	97.9			72.0-128

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

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

(LCS) R3386961-1 02/25/19 12:09 • (LCSD) R3386961-2 02/25/19 12:31

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	0.0500	0.0455	0.0468	91.1	93.6	76.0-121			2.68	20
Toluene	0.0500	0.0444	0.0454	88.8	90.8	80.0-120			2.23	20
Ethylbenzene	0.0500	0.0473	0.0464	94.6	92.9	80.0-124			1.82	20
Total Xylene	0.150	0.145	0.147	96.8	97.7	37.0-160			0.960	20
(S) a,a,a-Trifluorotoluene(FID)				93.8	94.2	77.0-120				
(S) a,a,a-Trifluorotoluene(PID)				94.8	95.2	72.0-128				

7 Gl

8 Al

9 Sc

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

(LCS) R3386961-3 02/25/19 12:52 • (LCSD) R3386961-4 02/25/19 13:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.68	5.65	103	103	72.0-127			0.600	20
(S) a,a,a-Trifluorotoluene(FID)				111	112	77.0-120				
(S) a,a,a-Trifluorotoluene(PID)				109	109	72.0-128				



L1072795-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1072795-01 02/26/19 02:16 • (MS) R3386961-6 02/26/19 03:21 • (MSD) R3386961-7 02/26/19 03:42

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	0.0500	0.335	12.9	12.5	50.2	48.8	500	10.0-155			2.80	32
Toluene	0.0500	2.26	14.4	14.6	48.7	49.3	500	10.0-160			0.963	34
Ethylbenzene	0.0500	1.19	17.9	17.4	66.6	65.0	500	10.0-160			2.38	32
Total Xylene	0.150	25.3	73.5	73.6	64.3	64.5	500	10.0-160	J6	J6	0.136	32
(S) a,a,a-Trifluorotoluene(FID)					94.3	94.9		77.0-120				
(S) a,a,a-Trifluorotoluene(PID)					95.6	94.9		72.0-128				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

L1072795-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1072795-01 02/26/19 02:16 • (MS) R3386961-8 02/26/19 04:03 • (MSD) R3386961-9 02/26/19 04:25

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	803	2270	2260	53.2	52.8	500	10.0-151			0.463	28
(S) a,a,a-Trifluorotoluene(FID)					101	102		77.0-120				
(S) a,a,a-Trifluorotoluene(PID)					102	102		72.0-128				

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3387096-1 02/26/19 16:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	137			18.0-148

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) R3387096-2 02/26/19 16:23 • (LCSD) R3387096-3 02/26/19 16:36

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	%	%	%			%	%
C10-C28 Diesel Range	50.0	41.3	38.2	82.6	76.4	50.0-150			7.80	20
(S) o-Terphenyl				142	142	18.0-148				

L1072818-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1072818-06 02/27/19 00:47 • (MS) R3387096-4 02/27/19 01:01 • (MSD) R3387096-5 02/27/19 01:15

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
C10-C28 Diesel Range	50.0	25.2	77.6	57.0	105	63.6	1	50.0-150		J3	30.6	20
(S) o-Terphenyl					104	106		18.0-148				



## 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.

## 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.
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.

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 <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	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

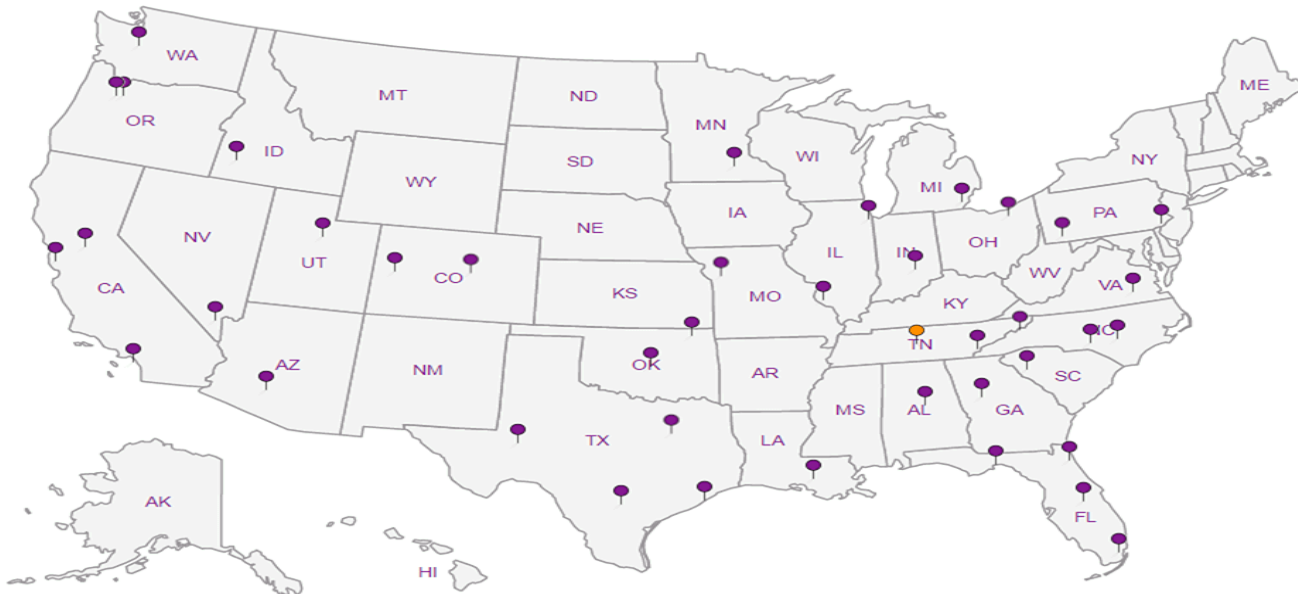
## Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

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

## 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.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

