**Nicholson GeoSolutions LLC**
3433 East Lake Drive
Centennial, CO 80121

May 19, 2018

Mr. Derek Johnson
Berry Petroleum Company
235 Callahan Avenue
Parachute, Colorado 81635

**Subject: F-01 Landfarm Screening Soil Sample Results**

Dear Derek:

Nicholson GeoSolutions LLC collected a screening level soil sample from the landfarm on the F-01 well pad in the Garden Gulch area, Garfield County, Colorado on May 6th, 2018. The sample was composited from 16 subsamples collected at depths of about 12-18 inches across the surface of the landfarm. This sample was analyzed for Total Volatile Petroleum Hydrocarbons (TVPH – gasoline range), Total Extractable Petroleum Hydrocarbons (TEPH – diesel and motor oil range), PAHs, and BTEX to evaluate compliance with the COGCC Table 910-1 standards and whether additional treatment is necessary. The laboratory report is attached.

All results are below the COGCC standards including benzo(a)pyrene at <0.006 mg/kg (standard = 0.022 mg/kg). This landfarm is now ready for final composite sampling.

Nicholson GeoSolutions LLC

DK Nicholson

David K. Nicholson, P.G.
Principal Geologist

# APPENDIX A
# Laboratory Report

# ANALYTICAL REPORT

May 16, 2018

## Berry Petroleum - Denver, CO

| | |
|---|---|
| Sample Delivery Group: | L991930 |
| Samples Received: | 05/08/2018 |
| Project Number: | |
| Description: | |

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

Entire Report Reviewed By:

Jason Romer
Technical Service Representative

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 ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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## 036-B L991930-01 Solid

Collected by: DK Nicholson | Collected date/time: 05/05/18 16:00 | Received date/time: 05/08/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG1109082 | 1 | 05/09/18 09:40 | 05/09/18 21:19 | DWR |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1109622 | 10 | 05/12/18 15:46 | 05/13/18 18:28 | DMW |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1109641 | 1 | 05/11/18 20:42 | 05/12/18 17:33 | KM |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1109641 | 10 | 05/11/18 20:42 | 05/13/18 21:59 | KM |

## O-29 L991930-02 Solid

Collected by: DK Nicholson | Collected date/time: 05/06/18 10:10 | Received date/time: 05/08/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG1109082 | 1 | 05/09/18 09:40 | 05/09/18 21:41 | DWR |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1109622 | 2 | 05/12/18 15:46 | 05/13/18 15:24 | DMW |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1109641 | 1 | 05/11/18 20:42 | 05/12/18 17:55 | KM |

## I-31 L991930-03 Solid

Collected by: DK Nicholson | Collected date/time: 05/06/18 10:50 | Received date/time: 05/08/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG1109082 | 1 | 05/09/18 09:40 | 05/09/18 22:03 | DWR |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1109622 | 2 | 05/12/18 15:46 | 05/13/18 15:39 | DMW |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1109795 | 1 | 05/11/18 00:45 | 05/11/18 09:22 | DMG |

## F-01 L991930-04 Solid

Collected by: DK Nicholson | Collected date/time: 05/06/18 11:00 | Received date/time: 05/08/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG1109082 | 1 | 05/09/18 09:40 | 05/09/18 22:25 | DWR |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1109622 | 2 | 05/12/18 15:46 | 05/13/18 16:35 | DMW |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1109795 | 1 | 05/11/18 00:45 | 05/11/18 09:43 | DMG |

## LI-02 L991930-05 Solid

Collected by: DK Nicholson | Collected date/time: 05/06/18 11:30 | Received date/time: 05/08/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG1109082 | 1 | 05/09/18 09:40 | 05/09/18 22:48 | DWR |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1109622 | 5 | 05/12/18 15:46 | 05/13/18 17:04 | DMW |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1109795 | 1 | 05/11/18 00:45 | 05/11/18 10:04 | DMG |

## O-06 L991930-06 Solid

Collected by: DK Nicholson | Collected date/time: 05/06/18 12:00 | Received date/time: 05/08/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG1109082 | 1 | 05/09/18 09:40 | 05/09/18 23:10 | DWR |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1109622 | 10 | 05/12/18 15:46 | 05/13/18 18:42 | DMW |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1109795 | 1 | 05/11/18 00:45 | 05/11/18 10:25 | DMG |

## I-11 L991930-07 Solid

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| DK Nicholson | 05/06/18 13:20 | 05/08/18 08:45 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG1109082 | 1 | 05/09/18 09:40 | 05/09/18 23:32 | DWR |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1109622 | 20 | 05/12/18 15:46 | 05/13/18 18:57 | DMW |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1109795 | 1 | 05/11/18 00:45 | 05/11/18 10:46 | DMG |

## J-13 L991930-08 Solid

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| DK Nicholson | 05/06/18 13:50 | 05/08/18 08:45 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|---|---|---|---|---|
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG1109082 | 1 | 05/09/18 09:40 | 05/09/18 23:54 | DWR |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG1109622 | 20 | 05/12/18 15:46 | 05/13/18 19:11 | DMW |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM | WG1109795 | 1 | 05/11/18 00:45 | 05/11/18 11:29 | DMG |

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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.

Jason Romer
Technical Service Representative

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

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Benzene | 0.00212 | | 0.000500 | 1 | 05/09/2018 22:25 | WG1109082 |
| Toluene | ND | | 0.00500 | 1 | 05/09/2018 22:25 | WG1109082 |
| Ethylbenzene | 0.00169 | B | 0.000500 | 1 | 05/09/2018 22:25 | WG1109082 |
| Total Xylene | 0.00249 | B | 0.00150 | 1 | 05/09/2018 22:25 | WG1109082 |
| TPH (GC/FID) Low Fraction | 0.126 | B | 0.100 | 1 | 05/09/2018 22:25 | WG1109082 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *92.6* | | *77.0-120* | | *05/09/2018 22:25* | WG1109082 |
| *(S) a,a,a-Trifluorotoluene(PID)* | *100* | | *75.0-128* | | *05/09/2018 22:25* | WG1109082 |

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

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| C10-C28 Diesel Range | 19.8 | | 8.00 | 2 | 05/13/2018 16:35 | WG1109622 |
| C28-C40 Oil Range | 29.4 | | 8.00 | 2 | 05/13/2018 16:35 | WG1109622 |
| *(S) o-Terphenyl* | *36.2* | | *18.0-148* | | *05/13/2018 16:35* | WG1109622 |

## 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 | 05/11/2018 09:43 | WG1109795 |
| Acenaphthene | ND | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Acenaphthylene | ND | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Benzo(a)anthracene | ND | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Benzo(a)pyrene | ND | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Benzo(b)fluoranthene | 0.0107 | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Benzo(g,h,i)perylene | 0.00773 | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Benzo(k)fluoranthene | ND | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Chrysene | ND | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Dibenz(a,h)anthracene | ND | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Fluoranthene | ND | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Fluorene | ND | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Indeno(1,2,3-cd)pyrene | ND | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Naphthalene | ND | | 0.0200 | 1 | 05/11/2018 09:43 | WG1109795 |
| Phenanthrene | 0.00676 | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| Pyrene | ND | | 0.00600 | 1 | 05/11/2018 09:43 | WG1109795 |
| 1-Methylnaphthalene | ND | | 0.0200 | 1 | 05/11/2018 09:43 | WG1109795 |
| 2-Methylnaphthalene | 0.0266 | | 0.0200 | 1 | 05/11/2018 09:43 | WG1109795 |
| 2-Chloronaphthalene | ND | | 0.0200 | 1 | 05/11/2018 09:43 | WG1109795 |
| *(S) p-Terphenyl-d14* | *29.3* | | *23.0-120* | | *05/11/2018 09:43* | WG1109795 |
| *(S) Nitrobenzene-d5* | *62.9* | | *14.0-149* | | *05/11/2018 09:43* | WG1109795 |
| *(S) 2-Fluorobiphenyl* | *29.8* | J2 | *34.0-125* | | *05/11/2018 09:43* | WG1109795 |

## Method Blank (MB)

(MB) R3309371-5 05/09/18 14:13

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| Benzene | U | | 0.000120 | 0.000500 |
| Toluene | 0.000311 | J | 0.000150 | 0.00500 |
| Ethylbenzene | 0.000255 | J | 0.000110 | 0.000500 |
| Total Xylene | U | | 0.000460 | 0.00150 |
| TPH (GC/FID) Low Fraction | 0.0230 | J | 0.0217 | 0.100 |
| *(S) a,a,a-Trifluorotoluene(FID)* | *99.1* | | | *77.0-120* |
| *(S) a,a,a-Trifluorotoluene(PID)* | *108* | | | *75.0-128* |

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

(LCS) R3309371-1 05/09/18 12:22 • (LCSD) R3309371-2 05/09/18 12:44

| 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 | 0.0539 | 0.0528 | 108 | 106 | 71.0-121 | | | 2.00 | 20 |
| Toluene | 0.0500 | 0.0544 | 0.0529 | 109 | 106 | 72.0-120 | | | 2.63 | 20 |
| Ethylbenzene | 0.0500 | 0.0563 | 0.0559 | 113 | 112 | 76.0-121 | | | 0.641 | 20 |
| Total Xylene | 0.150 | 0.165 | 0.164 | 110 | 109 | 75.0-124 | | | 0.668 | 20 |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | | *95.6* | *97.5* | *77.0-120* | | | | |
| *(S) a,a,a-Trifluorotoluene(PID)* | | | | *104* | *105* | *75.0-128* | | | | |

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

(LCS) R3309371-3 05/09/18 13:06 • (LCSD) R3309371-4 05/09/18 13:29

| 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 | 5.02 | 5.30 | 91.2 | 96.3 | 70.0-136 | | | 5.47 | 20 |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | | *109* | *111* | *77.0-120* | | | | |
| *(S) a,a,a-Trifluorotoluene(PID)* | | | | *117* | *119* | *75.0-128* | | | | |

## L991935-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L991935-01 05/10/18 00:17 • (MS) R3309371-6 05/10/18 00:39 • (MSD) R3309371-7 05/10/18 01:01

| 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 % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.0500 | 5.72 | 24.7 | 25.3 | 75.8 | 78.3 | 500 | 10.0-146 | | | 2.53 | 29 |
| Toluene | 0.0500 | 3.12 | 25.6 | 25.3 | 89.7 | 88.8 | 500 | 10.0-143 | | | 0.926 | 30 |
| Ethylbenzene | 0.0500 | 30.5 | 46.6 | 46.9 | 64.3 | 65.8 | 500 | 10.0-147 | | | 0.802 | 31 |
| Total Xylene | 0.150 | 58.2 | 115 | 115 | 75.3 | 76.3 | 500 | 10.0-149 | | | 0.608 | 30 |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | | | *130* | *131* | | *77.0-120* | J1 | J1 | | |
| *(S) a,a,a-Trifluorotoluene(PID)* | | | | | *133* | *134* | | *75.0-128* | J1 | J1 | | |

## L991935-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L991935-01 05/10/18 00:17 • (MS) R3309371-8 05/10/18 01:23 • (MSD) R3309371-9 05/10/18 01:45

| 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 | 1360 | 1950 | 1860 | 21.6 | 18.0 | 500 | 10.0-147 | | | 5.15 | 30 |
| *(S) a,a,a-Trifluorotoluene(FID)* | | | | | *139* | *137* | | *77.0-120* | J1 | J1 | | |
| *(S) a,a,a-Trifluorotoluene(PID)* | | | | | *141* | *139* | | *75.0-128* | J1 | J1 | | |

## Method Blank (MB)

(MB) R3309771-1 05/13/18 12:49

| 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-C40 Oil Range | U | | 0.274 | 4.00 |
| *(S) o-Terphenyl* | *74.7* | | | *18.0-148* |

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

(LCS) R3309771-2 05/13/18 13:03 • (LCSD) R3309771-3 05/13/18 13:17

| 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 % |
|---|---|---|---|---|---|---|---|---|---|---|
| C10-C28 Diesel Range | 50.0 | 27.0 | 28.7 | 53.9 | 57.5 | 50.0-150 | | | 6.39 | 20 |
| *(S) o-Terphenyl* | | | | *67.9* | *66.7* | *18.0-148* | | | | |

## L991930-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L991930-05 05/13/18 17:04 • (MS) R3309771-4 05/13/18 17:18 • (MSD) R3309771-5 05/13/18 17:31

| 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 | 176 | 223 | 248 | 94.4 | 145 | 5 | 50.0-150 | | | 10.8 | 20 |
| *(S) o-Terphenyl* | | | | | *51.5* | *60.0* | | *18.0-148* | | | | |

## Method Blank (MB)

(MB) R3309273-3 05/12/18 12:05

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| Anthracene | U | | 0.000600 | 0.00600 |
| Acenaphthene | U | | 0.000600 | 0.00600 |
| Acenaphthylene | U | | 0.000600 | 0.00600 |
| Benzo(a)anthracene | U | | 0.000600 | 0.00600 |
| Benzo(a)pyrene | U | | 0.000600 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.000600 | 0.00600 |
| Benzo(g,h,i)perylene | U | | 0.000600 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.000600 | 0.00600 |
| Chrysene | U | | 0.000600 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.000600 | 0.00600 |
| Fluoranthene | U | | 0.000600 | 0.00600 |
| Fluorene | U | | 0.000600 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.000600 | 0.00600 |
| Naphthalene | U | | 0.00200 | 0.0200 |
| Phenanthrene | U | | 0.000600 | 0.00600 |
| Pyrene | U | | 0.000600 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| *(S) Nitrobenzene-d5* | *67.1* | | | *14.0-149* |
| *(S) 2-Fluorobiphenyl* | *88.4* | | | *34.0-125* |
| *(S) p-Terphenyl-d14* | *87.2* | | | *23.0-120* |

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

(LCS) R3309273-1 05/12/18 11:21 • (LCSD) R3309273-2 05/12/18 11:43

| 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 % |
|---|---|---|---|---|---|---|---|---|---|---|
| Anthracene | 0.0800 | 0.0703 | 0.0685 | 87.8 | 85.6 | 50.0-125 | | | 2.54 | 20 |
| Acenaphthene | 0.0800 | 0.0631 | 0.0601 | 78.8 | 75.2 | 52.0-120 | | | 4.72 | 20 |
| Acenaphthylene | 0.0800 | 0.0645 | 0.0617 | 80.6 | 77.1 | 51.0-120 | | | 4.43 | 20 |
| Benzo(a)anthracene | 0.0800 | 0.0674 | 0.0640 | 84.2 | 80.1 | 46.0-121 | | | 5.07 | 20 |
| Benzo(a)pyrene | 0.0800 | 0.0691 | 0.0661 | 86.3 | 82.6 | 42.0-121 | | | 4.37 | 20 |
| Benzo(b)fluoranthene | 0.0800 | 0.0652 | 0.0611 | 81.5 | 76.4 | 42.0-123 | | | 6.42 | 20 |
| Benzo(g,h,i)perylene | 0.0800 | 0.0784 | 0.0738 | 98.0 | 92.3 | 43.0-128 | | | 5.99 | 20 |
| Benzo(k)fluoranthene | 0.0800 | 0.0702 | 0.0671 | 87.7 | 83.9 | 45.0-128 | | | 4.43 | 20 |
| Chrysene | 0.0800 | 0.0690 | 0.0666 | 86.3 | 83.2 | 48.0-127 | | | 3.58 | 20 |
| Dibenz(a,h)anthracene | 0.0800 | 0.0800 | 0.0767 | 100 | 95.8 | 43.0-132 | | | 4.32 | 20 |
| Fluoranthene | 0.0800 | 0.0723 | 0.0679 | 90.3 | 84.9 | 49.0-129 | | | 6.23 | 20 |

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

(LCS) R3309273-1 05/12/18 11:21 • (LCSD) R3309273-2 05/12/18 11:43

| 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 % |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluorene | 0.0800 | 0.0628 | 0.0601 | 78.5 | 75.2 | 50.0-120 | | | 4.30 | 20 |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0802 | 0.0765 | 100 | 95.7 | 44.0-131 | | | 4.66 | 20 |
| Naphthalene | 0.0800 | 0.0558 | 0.0546 | 69.8 | 68.2 | 50.0-120 | | | 2.24 | 20 |
| Phenanthrene | 0.0800 | 0.0661 | 0.0636 | 82.6 | 79.5 | 48.0-120 | | | 3.87 | 20 |
| Pyrene | 0.0800 | 0.0665 | 0.0638 | 83.2 | 79.7 | 48.0-135 | | | 4.22 | 20 |
| 1-Methylnaphthalene | 0.0800 | 0.0578 | 0.0558 | 72.3 | 69.8 | 52.0-122 | | | 3.52 | 20 |
| 2-Methylnaphthalene | 0.0800 | 0.0555 | 0.0537 | 69.3 | 67.1 | 52.0-120 | | | 3.26 | 20 |
| 2-Chloronaphthalene | 0.0800 | 0.0651 | 0.0633 | 81.3 | 79.1 | 50.0-120 | | | 2.78 | 20 |
| *(S) Nitrobenzene-d5* | | | | *71.8* | *68.4* | *14.0-149* | | | | |
| *(S) 2-Fluorobiphenyl* | | | | *94.6* | *88.9* | *34.0-125* | | | | |
| *(S) p-Terphenyl-d14* | | | | *88.2* | *84.0* | *23.0-120* | | | | |

## L991927-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L991927-02 05/12/18 15:22 • (MS) R3309273-4 05/12/18 15:44 • (MSD) R3309273-5 05/12/18 16:06

| 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 | 0.0800 | 0.0121 | 0.0861 | 0.0764 | 92.5 | 80.4 | 1 | 20.0-136 | | | 11.9 | 24 |
| Acenaphthene | 0.0800 | 0.0140 | 0.0682 | 0.0693 | 67.7 | 69.1 | 1 | 29.0-124 | | | 1.60 | 20 |
| Acenaphthylene | 0.0800 | ND | 0.0640 | 0.0675 | 80.0 | 84.3 | 1 | 35.0-120 | | | 5.31 | 20 |
| Benzo(a)anthracene | 0.0800 | 0.117 | 0.195 | 0.177 | 97.2 | 74.6 | 1 | 13.0-132 | | | 9.76 | 27 |
| Benzo(a)pyrene | 0.0800 | 0.107 | 0.174 | 0.157 | 83.8 | 63.3 | 1 | 14.0-138 | | | 9.94 | 27 |
| Benzo(b)fluoranthene | 0.0800 | 0.291 | 0.350 | 0.322 | 73.3 | 38.2 | 1 | 10.0-129 | | | 8.35 | 31 |
| Benzo(g,h,i)perylene | 0.0800 | 0.170 | 0.234 | 0.213 | 80.6 | 54.7 | 1 | 10.0-133 | | | 9.28 | 30 |
| Benzo(k)fluoranthene | 0.0800 | 0.0587 | 0.146 | 0.134 | 110 | 93.8 | 1 | 15.0-131 | | | 8.99 | 27 |
| Chrysene | 0.0800 | 0.172 | 0.246 | 0.219 | 93.1 | 59.3 | 1 | 15.0-137 | | | 11.6 | 25 |
| Dibenz(a,h)anthracene | 0.0800 | 0.0742 | 0.145 | 0.132 | 88.1 | 72.2 | 1 | 15.0-132 | | | 9.19 | 27 |
| Fluoranthene | 0.0800 | 0.127 | 0.199 | 0.175 | 90.2 | 60.5 | 1 | 13.0-139 | | | 12.7 | 28 |
| Fluorene | 0.0800 | 0.0137 | 0.0730 | 0.0689 | 74.1 | 69.1 | 1 | 27.0-122 | | | 5.71 | 22 |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.140 | 0.211 | 0.192 | 88.4 | 64.7 | 1 | 11.0-133 | | | 9.41 | 29 |
| Naphthalene | 0.0800 | 0.226 | 0.249 | 0.229 | 28.6 | 4.58 | 1 | 18.0-136 | | J6 | 8.05 | 21 |
| Phenanthrene | 0.0800 | 0.133 | 0.184 | 0.164 | 63.7 | 38.4 | 1 | 15.0-133 | | | 11.6 | 25 |
| Pyrene | 0.0800 | 0.0791 | 0.140 | 0.127 | 76.5 | 60.1 | 1 | 11.0-146 | | | 9.77 | 29 |
| 1-Methylnaphthalene | 0.0800 | 0.214 | 0.223 | 0.206 | 11.8 | 0.000 | 1 | 24.0-137 | J6 | J6 | 8.18 | 22 |
| 2-Methylnaphthalene | 0.0800 | 0.446 | 0.438 | 0.387 | 0.000 | 0.000 | 1 | 23.0-136 | V | V | 12.5 | 22 |
| 2-Chloronaphthalene | 0.0800 | ND | 0.0589 | 0.0628 | 73.6 | 78.5 | 1 | 36.0-120 | | | 6.34 | 20 |
| *(S) Nitrobenzene-d5* | | | | | *77.2* | *76.1* | | *14.0-149* | | | | |
| *(S) 2-Fluorobiphenyl* | | | | | *80.6* | *81.5* | | *34.0-125* | | | | |
| *(S) p-Terphenyl-d14* | | | | | *84.6* | *79.9* | | *23.0-120* | | | | |

## Method Blank (MB)

(MB) R3309041-3 05/11/18 08:40

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---|---|---|---|---|
| Anthracene | U | | 0.000600 | 0.00600 |
| Acenaphthene | U | | 0.000600 | 0.00600 |
| Acenaphthylene | U | | 0.000600 | 0.00600 |
| Benzo(a)anthracene | U | | 0.000600 | 0.00600 |
| Benzo(a)pyrene | U | | 0.000600 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.000600 | 0.00600 |
| Benzo(g,h,i)perylene | U | | 0.000600 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.000600 | 0.00600 |
| Chrysene | U | | 0.000600 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.000600 | 0.00600 |
| Fluoranthene | U | | 0.000600 | 0.00600 |
| Fluorene | U | | 0.000600 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.000600 | 0.00600 |
| Naphthalene | U | | 0.00200 | 0.0200 |
| Phenanthrene | U | | 0.000600 | 0.00600 |
| Pyrene | U | | 0.000600 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| *(S) Nitrobenzene-d5* | *82.0* | | | *14.0-149* |
| *(S) 2-Fluorobiphenyl* | *73.3* | | | *34.0-125* |
| *(S) p-Terphenyl-d14* | *80.5* | | | *23.0-120* |

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

(LCS) R3309041-1 05/11/18 07:57 • (LCSD) R3309041-2 05/11/18 08:19

| 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 % |
|---|---|---|---|---|---|---|---|---|---|---|
| Anthracene | 0.0800 | 0.0549 | 0.0523 | 68.6 | 65.3 | 50.0-125 | | | 4.88 | 20 |
| Acenaphthene | 0.0800 | 0.0474 | 0.0480 | 59.3 | 60.0 | 52.0-120 | | | 1.20 | 20 |
| Acenaphthylene | 0.0800 | 0.0484 | 0.0492 | 60.4 | 61.5 | 51.0-120 | | | 1.77 | 20 |
| Benzo(a)anthracene | 0.0800 | 0.0543 | 0.0513 | 67.9 | 64.1 | 46.0-121 | | | 5.69 | 20 |
| Benzo(a)pyrene | 0.0800 | 0.0559 | 0.0530 | 69.9 | 66.3 | 42.0-121 | | | 5.39 | 20 |
| Benzo(b)fluoranthene | 0.0800 | 0.0518 | 0.0503 | 64.8 | 62.9 | 42.0-123 | | | 3.01 | 20 |
| Benzo(g,h,i)perylene | 0.0800 | 0.0542 | 0.0514 | 67.7 | 64.2 | 43.0-128 | | | 5.32 | 20 |
| Benzo(k)fluoranthene | 0.0800 | 0.0582 | 0.0541 | 72.7 | 67.7 | 45.0-128 | | | 7.17 | 20 |
| Chrysene | 0.0800 | 0.0556 | 0.0525 | 69.5 | 65.6 | 48.0-127 | | | 5.74 | 20 |
| Dibenz(a,h)anthracene | 0.0800 | 0.0540 | 0.0512 | 67.4 | 63.9 | 43.0-132 | | | 5.32 | 20 |
| Fluoranthene | 0.0800 | 0.0561 | 0.0529 | 70.1 | 66.1 | 49.0-129 | | | 5.79 | 20 |

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

(LCS) R3309041-1 05/11/18 07:57 • (LCSD) R3309041-2 05/11/18 08:19

| 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 % |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluorene | 0.0800 | 0.0481 | 0.0482 | 60.1 | 60.3 | 50.0-120 | | | 0.353 | 20 |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0545 | 0.0518 | 68.1 | 64.8 | 44.0-131 | | | 5.01 | 20 |
| Naphthalene | 0.0800 | 0.0416 | 0.0445 | 52.1 | 55.7 | 50.0-120 | | | 6.71 | 20 |
| Phenanthrene | 0.0800 | 0.0509 | 0.0483 | 63.6 | 60.4 | 48.0-120 | | | 5.13 | 20 |
| Pyrene | 0.0800 | 0.0559 | 0.0530 | 69.9 | 66.2 | 48.0-135 | | | 5.33 | 20 |
| 1-Methylnaphthalene | 0.0800 | 0.0470 | 0.0490 | 58.7 | 61.3 | 52.0-122 | | | 4.26 | 20 |
| 2-Methylnaphthalene | 0.0800 | 0.0449 | 0.0470 | 56.1 | 58.8 | 52.0-120 | | | 4.67 | 20 |
| 2-Chloronaphthalene | 0.0800 | 0.0477 | 0.0494 | 59.7 | 61.7 | 50.0-120 | | | 3.33 | 20 |
| *(S) Nitrobenzene-d5* | | | | *87.8* | *77.5* | *14.0-149* | | | | |
| *(S) 2-Fluorobiphenyl* | | | | *75.0* | *67.1* | *34.0-125* | | | | |
| *(S) p-Terphenyl-d14* | | | | *76.0* | *66.2* | *23.0-120* | | | | |

## L992400-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L992400-01 05/11/18 15:21 • (MS) R3309041-4 05/11/18 15:42 • (MSD) R3309041-5 05/11/18 16:03

| Analyte | Spike Amount (dry) mg/kg | Original Result (dry) mg/kg | MS Result (dry) mg/kg | MSD Result (dry) mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Anthracene | 0.116 | ND | 0.0797 | 0.0733 | 69.0 | 63.4 | 1 | 20.0-136 | | | 8.43 | 24 |
| Acenaphthene | 0.116 | ND | 0.0502 | 0.0472 | 43.5 | 40.8 | 1 | 29.0-124 | | | 6.18 | 20 |
| Acenaphthylene | 0.116 | ND | 0.0534 | 0.0504 | 46.2 | 43.6 | 1 | 35.0-120 | | | 5.72 | 20 |
| Benzo(a)anthracene | 0.116 | 0.0723 | 0.154 | 0.114 | 70.3 | 36.2 | 1 | 13.0-132 | | J3 | 29.5 | 27 |
| Benzo(a)pyrene | 0.116 | 0.0667 | 0.107 | 0.0864 | 35.3 | 17.1 | 1 | 14.0-138 | | | 21.7 | 27 |
| Benzo(b)fluoranthene | 0.116 | 0.272 | 0.319 | 0.193 | 40.6 | 0.000 | 1 | 10.0-129 | | J3 J6 | 49.3 | 31 |
| Benzo(g,h,i)perylene | 0.116 | 0.169 | 0.146 | 0.131 | 0.000 | 0.000 | 1 | 10.0-133 | J6 | J6 | 11.2 | 30 |
| Benzo(k)fluoranthene | 0.116 | 0.0688 | 0.135 | 0.109 | 57.3 | 34.5 | 1 | 15.0-131 | | | 21.6 | 27 |
| Chrysene | 0.116 | 0.0956 | 0.240 | 0.146 | 125 | 43.9 | 1 | 15.0-137 | | J3 | 48.6 | 25 |
| Dibenz(a,h)anthracene | 0.116 | 0.0260 | 0.0690 | 0.0645 | 37.2 | 33.3 | 1 | 15.0-132 | | | 6.78 | 27 |
| Fluoranthene | 0.116 | 0.0708 | 0.132 | 0.113 | 52.7 | 36.1 | 1 | 13.0-139 | | | 15.7 | 28 |
| Fluorene | 0.116 | ND | 0.0544 | 0.0506 | 43.8 | 40.5 | 1 | 27.0-122 | | | 7.21 | 22 |
| Indeno(1,2,3-cd)pyrene | 0.116 | 0.112 | 0.127 | 0.113 | 12.6 | 0.824 | 1 | 11.0-133 | | J6 | 11.3 | 29 |
| Naphthalene | 0.116 | ND | 0.0595 | 0.0507 | 39.5 | 32.0 | 1 | 18.0-136 | | | 15.8 | 21 |
| Phenanthrene | 0.116 | 0.0211 | 0.0743 | 0.0760 | 46.0 | 47.6 | 1 | 15.0-133 | | | 2.35 | 25 |
| Pyrene | 0.116 | 0.128 | 0.198 | 0.164 | 61.0 | 31.2 | 1 | 11.0-146 | | | 19.0 | 29 |
| 1-Methylnaphthalene | 0.116 | ND | 0.0646 | 0.0575 | 47.1 | 41.0 | 1 | 24.0-137 | | | 11.6 | 22 |
| 2-Methylnaphthalene | 0.116 | ND | 0.0658 | 0.0593 | 41.1 | 35.5 | 1 | 23.0-136 | | | 10.5 | 22 |
| 2-Chloronaphthalene | 0.116 | ND | 0.0499 | 0.0459 | 43.2 | 39.7 | 1 | 36.0-120 | | | 8.36 | 20 |
| *(S) Nitrobenzene-d5* | | | | | *58.9* | *70.3* | | *14.0-149* | | | | |
| *(S) 2-Fluorobiphenyl* | | | | | *38.9* | *43.8* | | *34.0-125* | | | | |
| *(S) p-Terphenyl-d14* | | | | | *49.4* | *57.3* | | *23.0-120* | | | | |

## 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

| | |
|---|---|
| (dry) | Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils]. |
| 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. |
| 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. |
| J2 | Surrogate recovery limits have been exceeded; values are outside lower control limits. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| 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. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |

ESC Lab Sciences 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 ESC Lab Sciences.

## 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 | LAO00356 |
| Kentucky [1 6] | 90010 | South Carolina | 84004 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana [1] | LA180010 | Texas | T 104704245-17-14 |
| 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 |

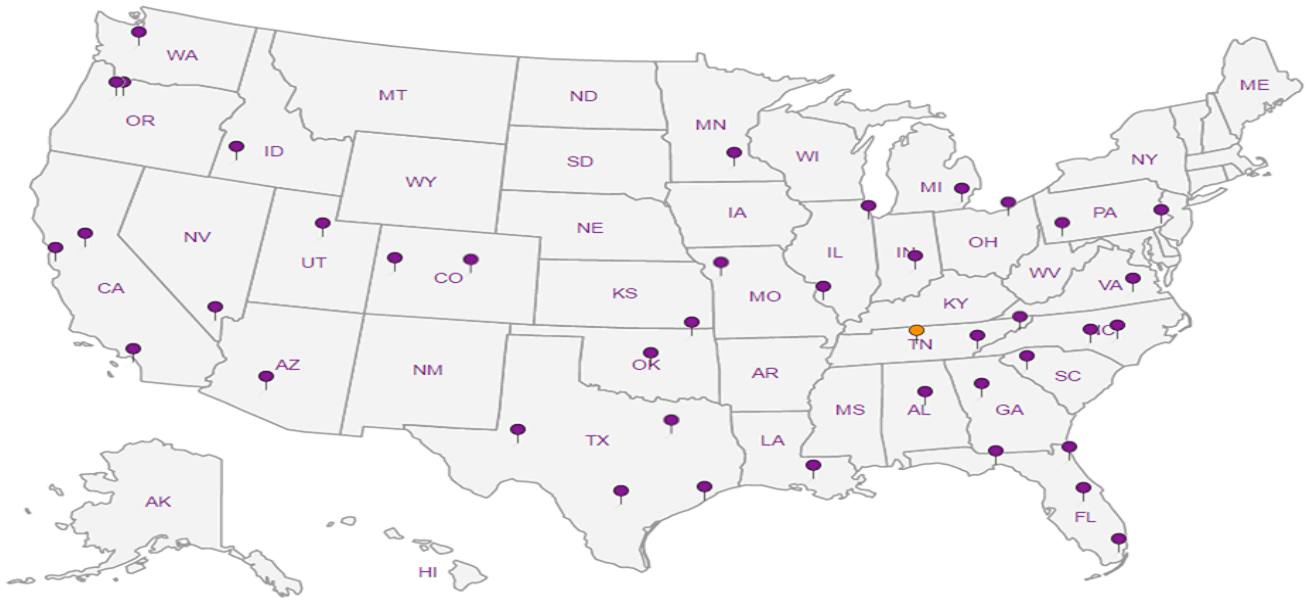
## Third Party Federal Accreditations

| | | | |
|---|---|---|---|
| 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

ESC Lab Sciences 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. ESC Lab Sciences performs all testing at our central laboratory.



**Berry Petroleum - Denver, CO**

1999 Broadway, Suite 3700
Denver, CO 93309

Billing Information:
Don Wilbourn
235 Callahan Ave
Parachute, CO 81635

Report to: Dave Nicholson

Email To: dknicholson@q.com

Project Description:

City/State Collected:

Phone: ~~303-999-4400~~ 303-601-2023
Fax: ~~303-999-4401~~

Client Project #

Lab Project # BERPETDCO-NICHOLSON

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature): DKNicholson
Immediately Packed on Ice N (Y)

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed

Quote #

Analysis / Container / Preservative

Pres Chk

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs | BTEXGRO 4ozClr-NoPres | DRORLA, SV8270PAHSIM 4ozClr-NoPres | | | | | | | | | Remarks | Sample # (lab only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~B-03~~ 036-B | | SS | | 5/5 | 1600 | 2 | X | X | | | | | | | | | | 01 |
| B-29 | | SS | | 5/6 | 1010 | 2 | X | X | | | | | | | | | | 02 |
| I-31 | | SS | | | 1050 | 2 | X | X | | | | | | | | | | 03 |
| F-01 | | SS | | | 1100 | 2 | X | X | | | | | | | | | | 04 |
| LI-02 | | SS | | | 1130 | 2 | X | X | | | | | | | | | | 05 |
| O-06 | | SS | | | 1200 | 2 | X | X | | | | | | | | | | 06 |
| I-11 | | SS | | | 1320 | 2 | X | X | | | | | | | | | | 07 |
| J-13 | | SS | | | 1350 | 2 | X | X | | | | | | | | | | 08 |
| | | SS | | | | 2 | X | X | | | | | | | | | | |
| | | SS | | | | 2 | X | X | | | | | | | | | | |

Chain of Custody Page 1 of 1

ESC LABORATORIES
a subsidiary of Accelerated

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

L# 99193-
T: E173
Acctnum: BERPETDCO
Template: T134889
Prelogin: P648203
TSR: 134 - Mark W. Beasley
PB: 4-10-18 CM
Shipped Via: FedEx Ground

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

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 4276 0141 2910

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) | Trip Blank Received: Yes / No HCL / MeoH TBR | If preservation required by Login: Date/Time |
|---|---|---|---|---|---|
| DKNicholson | 5/7/18 | 1200 | Fedex | | |
| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) | Temp: 0.3 °C Bottles Received: 16 | |
| Relinquished by : (Signature) | Date: | Time: | Received for lab by: (Signature) | Date: 5-8-18 Time: 0845 | Hold: Condition: NCF / OK |