



Nicholson GeoSolutions LLC

3433 East Lake Drive
Centennial, CO 80121

June 15, 2016

Mr. Terry Pape
HRM Resources, LLC
410 17th Street, Suite 1100
Denver, CO 80202

**Subject: Cowles “P” Landfarm Sampling Results
COGCC Remediation #9053**

Dear Terry:

Nicholson GeoSolutions LLC was retained by HRM Resources II LLC (HRM) to conduct soil sampling of the landfarm on the Cowles “P” lease, Washington County, Colorado. Sampling of the landfarm was conducted at the required rate of approximately one sample per 100 yards of material on May 25th, 2016. The landfarm was previously sampled on October 18th, 2015.

GPS mapping showed that the landfarm covers about 0.10 acres and contains an estimated 250 yards of material. A total of 3 discrete soil samples were collected at depths of approximately 12-16 inches. These samples were collected from approximately the same locations as those collected in October 2015. The extent of the landfarm cell and the locations of the samples are shown on Figure 1.

All samples were analyzed for Total Volatile Petroleum Hydrocarbons (TVPH – gasoline range), Total Extractable Petroleum Hydrocarbons (TEPH – diesel and motor oil range), and BTEX (benzene, toluene, ethylbenzene, and xylenes) to evaluate compliance with the COGCC Table 910-1 standards and further treatment needs.

Table 1 provides a summary of the analytical results for the samples. The laboratory report is contained in Appendix A. For the May 2016 sampling event, the sum of the concentrations of gasoline, diesel, and motor oil range petroleum hydrocarbons (total petroleum hydrocarbons [TPH]) exceeded the COGCC standard of 500 mg/kg for all three samples and ranged from 2,510.605 mg/kg to 11,670 mg/kg.

Table 1 Cowles No. 1 Landfarm Sample Results – May 25, 2016

| | Table 910-1 Standards | Cowles LF-1 | Cowles LF-2 | Cowles LF-3 |
|-------------------------------|-----------------------|--------------|----------------|----------------|
| TVPH – gasoline range | 500 ¹ | 0.605 | <0.5 | <0.5 |
| TEPH – diesel/motor oil range | 500 ¹ | 2,510 | 11,670 | 3,570 |
| benzene | 0.17 | <0.0025 | <0.0025 | <0.0025 |
| toluene | 85 | <0.025 | <0.025 | <0.025 |
| ethylbenzene | 100 | <0.0025 UJ | <0.0025 UJ | <0.0025 UJ |
| xylenes | 175 | 0.0123 | <0.0075 | <0.0075 |

¹The standard is 500 for the combined total of TVPH and TEPH All units in mg/kg

UJ = estimated detection limit

Values in bold type exceed standards

Table 2 provides the TPH results for the October 18th, 2015 and May 25th, 2016 samples and the percent difference between the two samples at each sample location. TPH ranged from 3,831 mg/kg to 43,600 mg/kg for the October 2015 samples and from 2,511 mg/kg to 11,670 mg/kg for the May 2016 samples. The TPH concentration was lower for the May 2016 samples at two of the three sample locations and higher at the remaining location. The landfarm was thoroughly tilled on two occasions since the last sampling event which may account for the variable results.

Table 2 Comparison of TPH Results, October 18, 2015 and May 25, 2016

| Sample Location | TPH (mg/kg) October 18, 2015 | TPH (mg/kg) May 25, 2016 | %Difference |
|-----------------|------------------------------|--------------------------|-------------|
| Cowles-LF-1 | 7,316 | 2,511 | -65.7 |
| Cowles-LF-2 | 3,831 | 11,670 | 204.6 |
| Cowles-LF-3 | 43,600 | 3,570 | -91.8 |

Table 3 provides summary statistics for the two sampling events. The average TPH concentration for the three samples dropped from 18,249 mg/kg to 5,917 mg/kg between October 18th, 2015 and May 25th, 2016. The median concentration dropped from 7,316 mg/kg to 3,570 mg/kg. Using the results provided above in Table 2, the average % TPH reduction for the overall landfarm was -67.6%.

Table 3 Summary Statistics for the October 2015 and May 2016 Samples

| Sample Date | Minimum | Maximum | Average | Median | Average % Difference |
|--------------|---------|---------|---------|--------|----------------------|
| Oct 18, 2015 | 3,831 | 43,600 | 18,249 | 7,316 | |
| May 25, 2016 | 2,511 | 11,670 | 5,917 | 3,570 | -67.6 |

Using the difference between the average TPH concentrations of 12,332 mg/kg, and the time period of 220 days, a biodegradation rate of 56.1 mg/kg-day is obtained. However, with only two data points, the calculated rate assumes that the rate of decline is linear when it is likely a first-order or second-order decay equation. Therefore, the calculated biodegradation rate may be

higher than the actual rate. A more accurate rate may be determined following the collection of the October 2016 samples.

Based on the analytical results, bioremediation of the TPH contained in the soils in the landfarm cells at the Cowles "P" lease is occurring but the results so far are erratic. Additional treatment of the landfarm cells including tilling will be conducted prior to the next sampling event in October 2016.

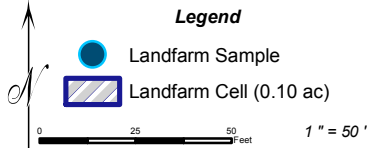
Nicholson GeoSolutions LLC

A handwritten signature in blue ink that reads "DK Nicholson". The signature is written in a cursive, flowing style.

David K. Nicholson, P.G.
Principal Geologist



GeoSolutions
NICHOLSON



HRM Resources, LLC

Cowles "P"
Landfarm
Sampling

Figure 1
November
2015

APPENDIX A
Laboratory Report

HRM Resources, LLC - Denver, CO

Sample Delivery Group: L838263
Samples Received: 05/27/2016
Project Number:
Description: HRM Landfarm Sampling

Report To: Dave Nicholson
410 17th St., Ste. 1600
Denver, CO 80202

Entire Report Reviewed By:



Mark W. Beasley
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.



| | | |
|---|-----------|-----------------------|
| ¹Cp: Cover Page | 1 | ¹Cp |
| ²Tc: Table of Contents | 2 | ²Tc |
| ³Ss: Sample Summary | 3 | ³Ss |
| ⁴Cn: Case Narrative | 4 | ⁴Cn |
| ⁵Sr: Sample Results | 5 | ⁵Sr |
| COWLES-LF-1 L838263-01 | 5 | |
| COWLES-LF-2 L838263-02 | 6 | |
| COWLES-LF-3 L838263-03 | 7 | |
| ⁶Qc: Quality Control Summary | 8 | ⁶Qc |
| Volatile Organic Compounds (GC) by Method 8015/8021 | 8 | |
| Semi-Volatile Organic Compounds (GC) by Method 8015 | 10 | |
| ⁷Gl: Glossary of Terms | 11 | ⁷Gl |
| ⁸Al: Accreditations & Locations | 12 | ⁸Al |
| ⁹Sc: Chain of Custody | 13 | ⁹Sc |

SAMPLE SUMMARY



COWLES-LF-1 L838263-01 Solid

Collected by
Dave Nicholson Collected date/time
05/25/16 10:00 Received date/time
05/27/16 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG876716 | 10 | 06/03/16 09:48 | 06/03/16 16:25 | KLM |
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG876836 | 5 | 06/03/16 18:56 | 06/04/16 23:58 | BMB |

1
Cp

2
Tc

3
Ss

COWLES-LF-2 L838263-02 Solid

Collected by
Dave Nicholson Collected date/time
05/25/16 10:05 Received date/time
05/27/16 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG876716 | 200 | 06/03/16 09:48 | 06/03/16 20:05 | KLM |
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG876836 | 5 | 06/03/16 18:56 | 06/05/16 00:20 | BMB |

4
Cn

5
Sr

6
Qc

COWLES-LF-3 L838263-03 Solid

Collected by
Dave Nicholson Collected date/time
05/25/16 10:10 Received date/time
05/27/16 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|----------|----------|-----------------------|--------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method 8015 | WG876716 | 10 | 06/03/16 09:48 | 06/03/16 16:11 | KLM |
| Volatile Organic Compounds (GC) by Method 8015/8021 | WG876836 | 5 | 06/03/16 18:56 | 06/05/16 00:42 | BMB |

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. 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
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Volatile Organic Compounds (GC) by Method 8015/8021

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|---------------------------------|--------|-----------|----------|----------|------------------|--------------------------|
| | mg/kg | | mg/kg | | date / time | |
| Benzene | ND | | 0.00250 | 5 | 06/04/2016 23:58 | WG876836 |
| Toluene | ND | | 0.0250 | 5 | 06/04/2016 23:58 | WG876836 |
| Ethylbenzene | ND | | 0.00250 | 5 | 06/04/2016 23:58 | WG876836 |
| Total Xylene | 0.0123 | <u>B</u> | 0.00750 | 5 | 06/04/2016 23:58 | WG876836 |
| TPH (GC/FID) Low Fraction | 0.605 | <u>B</u> | 0.500 | 5 | 06/04/2016 23:58 | WG876836 |
| (S) a,a,a-Trifluorotoluene(FID) | 90.6 | | 59.0-128 | | 06/04/2016 23:58 | WG876836 |
| (S) a,a,a-Trifluorotoluene(PID) | 97.0 | | 54.0-144 | | 06/04/2016 23:58 | WG876836 |

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

Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|----------------------|--------|-----------|----------|----------|------------------|--------------------------|
| | mg/kg | | mg/kg | | date / time | |
| C10-C28 Diesel Range | 1490 | | 40.0 | 10 | 06/03/2016 16:25 | WG876716 |
| C28-C40 Oil Range | 1020 | | 40.0 | 10 | 06/03/2016 16:25 | WG876716 |
| (S) o-Terphenyl | 50.9 | | 50.0-150 | | 06/03/2016 16:25 | WG876716 |



Volatile Organic Compounds (GC) by Method 8015/8021

| Analyte | Result mg/kg | Qualifier | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------------------------------|-----------------|-----------|--------------|----------|-------------------------|--------------------------|
| Benzene | ND | | 0.00250 | 5 | 06/05/2016 00:20 | WG876836 |
| Toluene | ND | | 0.0250 | 5 | 06/05/2016 00:20 | WG876836 |
| Ethylbenzene | ND | | 0.00250 | 5 | 06/05/2016 00:20 | WG876836 |
| Total Xylene | ND | <u>B</u> | 0.00750 | 5 | 06/05/2016 00:20 | WG876836 |
| TPH (GC/FID) Low Fraction | ND | | 0.500 | 5 | 06/05/2016 00:20 | WG876836 |
| (S) a,a,a-Trifluorotoluene(FID) | 92.5 | | 59.0-128 | | 06/05/2016 00:20 | WG876836 |
| (S) a,a,a-Trifluorotoluene(PID) | 98.7 | | 54.0-144 | | 06/05/2016 00:20 | WG876836 |

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

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 | 6990 | | 800 | 200 | 06/03/2016 20:05 | WG876716 |
| C28-C40 Oil Range | 4680 | | 800 | 200 | 06/03/2016 20:05 | WG876716 |
| (S) o-Terphenyl | 0.000 | <u>J7</u> | 50.0-150 | | 06/03/2016 20:05 | WG876716 |



Volatile Organic Compounds (GC) by Method 8015/8021

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|---------------------------------|--------|-----------|----------|----------|------------------|--------------------------|
| | mg/kg | | mg/kg | | date / time | |
| Benzene | ND | | 0.00250 | 5 | 06/05/2016 00:42 | WG876836 |
| Toluene | ND | | 0.0250 | 5 | 06/05/2016 00:42 | WG876836 |
| Ethylbenzene | ND | | 0.00250 | 5 | 06/05/2016 00:42 | WG876836 |
| Total Xylene | ND | <u>B</u> | 0.00750 | 5 | 06/05/2016 00:42 | WG876836 |
| TPH (GC/FID) Low Fraction | ND | | 0.500 | 5 | 06/05/2016 00:42 | WG876836 |
| (S) a,a,a-Trifluorotoluene(FID) | 91.8 | | 59.0-128 | | 06/05/2016 00:42 | WG876836 |
| (S) a,a,a-Trifluorotoluene(PID) | 98.0 | | 54.0-144 | | 06/05/2016 00:42 | WG876836 |

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

Semi-Volatile Organic Compounds (GC) by Method 8015

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|----------------------|--------|-----------|----------|----------|------------------|--------------------------|
| | mg/kg | | mg/kg | | date / time | |
| C10-C28 Diesel Range | 2240 | | 40.0 | 10 | 06/03/2016 16:11 | WG876716 |
| C28-C40 Oil Range | 1330 | | 40.0 | 10 | 06/03/2016 16:11 | WG876716 |
| (S) o-Terphenyl | 16.6 | <u>J2</u> | 50.0-150 | | 06/03/2016 16:11 | WG876716 |



Method Blank (MB)

(MB) R3141910-5 06/04/16 15:49

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------------------------------|-----------|--------------|----------|----------|
| | mg/kg | | mg/kg | mg/kg |
| Benzene | U | | 0.000120 | 0.000500 |
| Toluene | 0.000545 | ↓ | 0.000150 | 0.00500 |
| Ethylbenzene | 0.000176 | ↓ | 0.000110 | 0.000500 |
| Total Xylene | U | | 0.000460 | 0.00150 |
| TPH (GC/FID) Low Fraction | 0.0243 | ↓ | 0.0217 | 0.100 |
| (S) a,a,a-Trifluorotoluene(FID) | 92.6 | | | 59.0-128 |
| (S) a,a,a-Trifluorotoluene(PID) | 99.6 | | | 54.0-144 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

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

(LCS) R3141910-1 06/04/16 13:58 • (LCSD) R3141910-2 06/04/16 14:20

| 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 | % | % | % | | | % | % |
| Benzene | 0.0500 | 0.0464 | 0.0467 | 92.8 | 93.4 | 70.0-130 | | | 0.580 | 20 |
| Toluene | 0.0500 | 0.0457 | 0.0453 | 91.4 | 90.5 | 70.0-130 | | | 0.980 | 20 |
| Ethylbenzene | 0.0500 | 0.0464 | 0.0466 | 92.7 | 93.2 | 70.0-130 | | | 0.560 | 20 |
| Total Xylene | 0.150 | 0.140 | 0.140 | 93.5 | 93.4 | 70.0-130 | | | 0.150 | 20 |
| (S) a,a,a-Trifluorotoluene(FID) | | | | 91.5 | 92.2 | 59.0-128 | | | | |
| (S) a,a,a-Trifluorotoluene(PID) | | | | 97.1 | 98.3 | 54.0-144 | | | | |

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R3141910-3 06/04/16 14:42 • (LCSD) R3141910-4 06/04/16 15:05

| 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 | % | % | % | | | % | % |
| TPH (GC/FID) Low Fraction | 5.50 | 5.54 | 6.55 | 101 | 119 | 63.5-137 | | | 16.6 | 20 |
| (S) a,a,a-Trifluorotoluene(FID) | | | | 102 | 105 | 59.0-128 | | | | |
| (S) a,a,a-Trifluorotoluene(PID) | | | | 110 | 112 | 54.0-144 | | | | |

L838260-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838260-01 06/04/16 18:26 • (MS) R3141910-6 06/04/16 16:35 • (MSD) R3141910-7 06/04/16 16:57

| 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 | % | % | | % | | | % | % |
| Benzene | 0.0500 | ND | 0.184 | 0.208 | 73.7 | 83.2 | 5 | 49.7-127 | | | 12.1 | 23.5 |
| Toluene | 0.0500 | ND | 0.157 | 0.185 | 62.0 | 73.1 | 5 | 49.8-132 | | | 16.2 | 23.5 |
| Ethylbenzene | 0.0500 | ND | 0.136 | 0.174 | 54.3 | 69.6 | 5 | 40.8-141 | | J3 | 24.6 | 23.8 |
| Total Xylene | 0.150 | 0.00832 | 0.419 | 0.527 | 54.7 | 69.2 | 5 | 41.2-140 | | | 23.0 | 23.7 |
| (S) a,a,a-Trifluorotoluene(FID) | | | | | 90.8 | 92.7 | | 59.0-128 | | | | |



L838260-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838260-01 06/04/16 18:26 • (MS) R3141910-6 06/04/16 16:35 • (MSD) R3141910-7 06/04/16 16:57

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| (S) a,a,a-Trifluorotoluene(PID) | | | | | 97.1 | 98.0 | | 54.0-144 | | | | |

L838260-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838260-01 06/04/16 18:26 • (MS) R3141910-8 06/04/16 17:20 • (MSD) R3141910-9 06/04/16 17:42

| 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 % |
|---------------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| TPH (GC/FID) Low Fraction | 5.50 | 1.24 | 15.5 | 12.4 | 52.0 | 40.7 | 5 | 28.5-138 | | | 22.2 | 23.6 |
| (S) a,a,a-Trifluorotoluene(FID) | | | | | 95.9 | 95.2 | | 59.0-128 | | | | |
| (S) a,a,a-Trifluorotoluene(PID) | | | | | 102 | 101 | | 54.0-144 | | | | |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3141535-1 06/03/16 14:00

| 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 | 100 | | | 50.0-150 |

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

(LCS) R3141535-2 06/03/16 14:14 • (LCSD) R3141535-3 06/03/16 14:29

| 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 | 60.0 | 49.9 | 47.5 | 83.1 | 79.1 | 50.0-150 | | | 4.96 | 20 |
| (S) o-Terphenyl | | | | 96.2 | 89.3 | 50.0-150 | | | | |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

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

| 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. |
| 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. |
| J7 | Surrogate recovery cannot be used for control limit evaluation due to dilution. |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



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.



State Accreditations

| | | | |
|-----------------------|-------------|-----------------------------|-------------------|
| Alabama | 40660 | Nevada | TN-03-2002-34 |
| Alaska | UST-080 | New Hampshire | 2975 |
| Arizona | AZ0612 | New Jersey–NELAP | TN002 |
| Arkansas | 88-0469 | New Mexico | TN00003 |
| California | 01157CA | New York | 11742 |
| Colorado | TN00003 | North Carolina | Env375 |
| Connecticut | PH-0197 | North Carolina ¹ | DW21704 |
| Florida | E87487 | North Carolina ² | 41 |
| Georgia | NELAP | North Dakota | R-140 |
| Georgia ¹ | 923 | Ohio–VAP | CL0069 |
| Idaho | TN00003 | Oklahoma | 9915 |
| Illinois | 200008 | Oregon | TN200002 |
| Indiana | C-TN-01 | Pennsylvania | 68-02979 |
| Iowa | 364 | Rhode Island | 221 |
| Kansas | E-10277 | South Carolina | 84004 |
| Kentucky ¹ | 90010 | South Dakota | n/a |
| Kentucky ² | 16 | Tennessee ¹⁴ | 2006 |
| Louisiana | AI30792 | Texas | T 104704245-07-TX |
| Maine | TN0002 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | 6157585858 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 109 |
| Minnesota | 047-999-395 | Washington | C1915 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |
| Nebraska | NE-OS-15-05 | | |

Third Party & Federal Accreditations

| | | | |
|-------------------------------|---------|------|---------|
| A2LA – ISO 17025 | 1461.01 | AIHA | 100789 |
| A2LA – ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | S-67674 |
| EPA–Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ^{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.**

