



Nicholson GeoSolutions LLC

3433 East Lake Drive
Centennial, CO 80121

April 2, 2018

Mr. Terry Pape
HRM Resources, LLC
410 17th Street, Suite 1600
Denver, CO 80202

**Subject: Lipplemann “P” Landfarm Sampling Results
COGCC Remediation #9058**

Dear Terry:

Nicholson GeoSolutions LLC was retained by HRM Resources II LLC (HRM) to conduct soil sampling of the landfarm on the Lipplemann “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 March 18th, 2018. The landfarm was previously sampled on October 18th, 2015, May 25th, 2016, October 29th, 2016, May 16th, 2017, and October 23rd, 2017.

GPS mapping showed that the three landfarm cells cover a total of about 0.38 acres and contain an estimated 980 yards of material. Eleven discrete soil samples were collected at depths of approximately 12-16 inches from approximately the same locations as those previously collected. The extent of the landfarm cells and the locations of the samples are shown on Figure 1. Tilling of the landfarm was performed on March 14th, April 25th, September 30th during 2017, and on March 12th, 2018. In addition, a nitrogen fertilizer was added during the April 2017 tilling.

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. SAR, pH, and conductivity were previously analyzed in October 2016 for the landfarm samples from this site.

Table 1 provides a summary of the analytical results for the samples. The laboratory report is contained in Appendix A. For the March 2018 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 11 samples.

Table 1 Lippemmann “P” Landfarm Sample Results – March 18, 2018

	Table 910-1 Standards	Lippemmann LF-1	Lippemmann LF-2	Lippemmann LF-3	Lippemmann LF-4	Lippemmann LF-5
TVPH – gasoline range	500 ¹	<0.1	0.101	0.229	<0.1	<0.1
TEPH – diesel/motor oil range		1,249	4,920	6,060	2,053	1,341
benzene	0.17	0.00152	0.000597	<0.0005	0.00141	0.00124
toluene	85	<0.005	<0.005	<0.005	<0.005	<0.005
ethylbenzene	100	<0.0005	<0.0005	<0.0005	0.000711	<0.0005
xylenes	175	<0.0015	0.00205	0.00351	0.00188	<0.0015

	Standards	Lippemmann LF-6	Lippemmann LF-7	Lippemmann LF-8	Lippemmann LF-9	Lippemmann LF-10	Lippemmann LF-11
TVPH	500 ¹	<0.1	<0.1	<0.1	3.45	<0.1	3.34
TEPH		2,730	2,820	1,968	1,226	1,714	3,660
benzene	0.17	0.00143	0.00126	0.00142	0.00168	<0.0005	0.00203
toluene	85	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ethylbenzene	100	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
xylenes	175	<0.0015	<0.0015	<0.0015	0.0378	<0.0015	0.049

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

Values in bold type exceed standards

Table 2 provides the TPH results for the October 18th, 2015 and March 18th, 2018 samples and the percent difference between the two samples at each sample location. TPH ranged from 932 mg/kg to 8,160 mg/kg for the October 2015 samples and from 1,226.45 mg/kg to 4,920.229 mg/kg for the March 2018 samples. The TPH concentration was lower for the March 2018 samples at seven of the 11 sample locations and higher at four locations.

Table 2 Comparison of TPH Results, October 18, 2015 and March 18, 2018

Sample Location	TPH (mg/kg) October 18, 2015	TPH (mg/kg) March 18, 2018	%Difference
Lippemmann-LF-1	932	1,249	34.0
Lippemmann-LF-2	7,351	4,920.1	-33.1
Lippemmann-LF-3	2,339	6,060.2	159.1
Lippemmann-LF-4	3,155	2,053	-34.9
Lippemmann-LF-5	4,951	1,341	-72.9
Lippemmann-LF-6	2,874	2,730	-5.0
Lippemmann-LF-7	5,840	2,820	-51.7
Lippemmann-LF-8	1,582	1,968	24.4
Lippemmann-LF-9	8,160	1,229.5	-84.9
Lippemmann-LF-10 ¹	65,653	1,714	-97.4
Lippemmann-LF-11 ¹	2,449	3,663.3	49.6

¹comparison is between May 25th, 2016 and March 18th, 2018

Table 3 provides summary statistics for the two sampling events. The average TPH concentration for the eleven samples decreased from 4,132 mg/kg to 2,704 mg/kg between October 18th, 2015 and March 18th, 2018. Using the results provided above in Table 2, the average % TPH decrease for the overall landfarm was -34.5%.

Table 3 Summary Statistics for the October 2015 and March 2018 Samples

Sample Date	Minimum	Maximum	Average	Median	Average % Difference
Oct 18, 2015	932	8,160	4,132	3,155	
Mar 18, 2018	1,230	6,060	2,704	2,053	-34.5

Figure 1 shows the average TPH concentration in the landfarm from October 2015 to March 2018. Using the difference between the average TPH concentrations of 1,428 mg/kg, and the time period of 882 days, a biodegradation rate of 1.62 mg/kg-day is obtained. Using these data, and assuming a linear rate of decay, over 1,000 days of treatment remain to reach the standard of 500 mg/kg. However, recent sample results have been higher than expected, perhaps because of more aggressive tilling employed by HRM during the past two years. The trendline suggests that the average TPH concentration in the landfarms would reach the standard of 500 mg/kg in the next year.

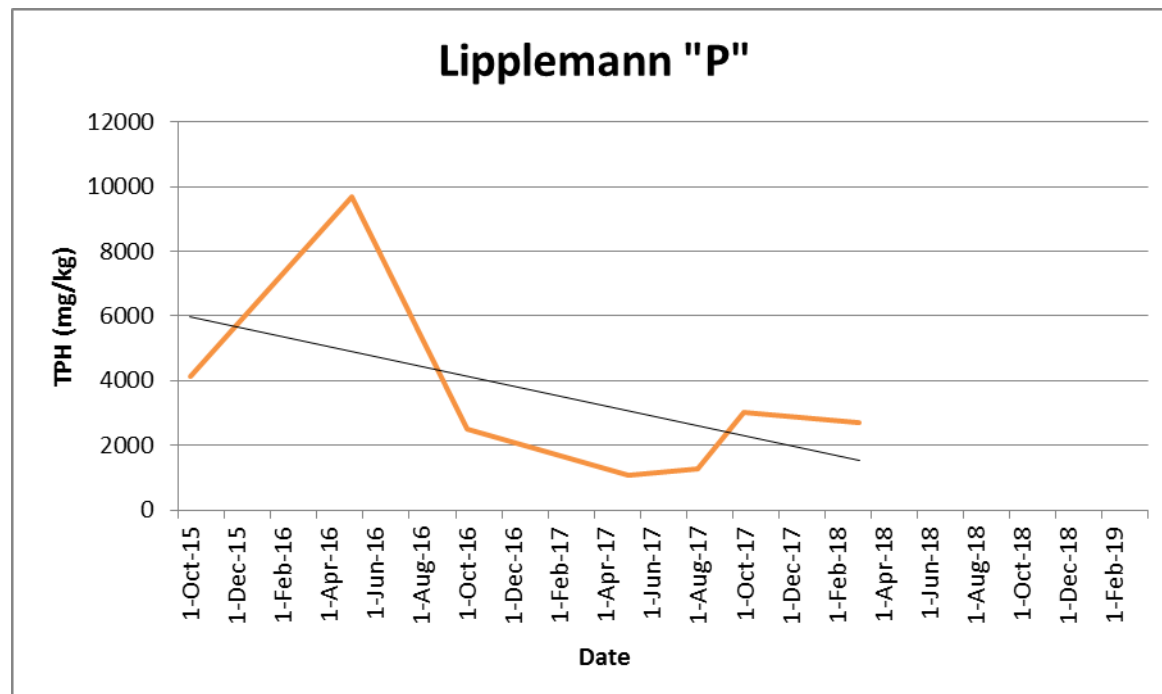


Figure 1 TPH Concentrations from October 2015 to March 2018

Nicholson GeoSolutions LLC

David K. Nicholson, P.G.
Principal Geologist



APPENDIX A
Laboratory Report

March 29, 2018

HRM Resources, LLC - Denver, CO

Sample Delivery Group: L978863
Samples Received: 03/20/2018
Project Number:
Description: HRM Landfarm Sampling

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

Entire Report Reviewed By:



Olivia Studebaker
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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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



LIPPLEMAN-LF-1 L978863-01 Solid

			Collected by DK Nicholson	Collected date/time 03/18/18 09:50	Received date/time 03/20/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1087633	1	03/21/18 08:42	03/22/18 01:48	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1087677	20	03/23/18 10:00	03/26/18 16:35	MTJ

¹ Cp

² Tc

³ Ss

LIPPLEMAN-LF-2 L978863-02 Solid

			Collected by DK Nicholson	Collected date/time 03/18/18 09:55	Received date/time 03/20/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1087633	1	03/21/18 08:42	03/26/18 19:26	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1087677	100	03/23/18 10:00	03/26/18 17:47	MTJ

⁴ Cn

⁵ Sr

⁶ Qc

LIPPLEMAN-LF-3 L978863-03 Solid

			Collected by DK Nicholson	Collected date/time 03/18/18 10:00	Received date/time 03/20/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1087633	1	03/21/18 08:42	03/26/18 20:04	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1087677	100	03/23/18 10:00	03/26/18 17:59	MTJ

⁷ Gl

⁸ Al

⁹ Sc

LIPPLEMAN-LF-4 L978863-04 Solid

			Collected by DK Nicholson	Collected date/time 03/18/18 10:05	Received date/time 03/20/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1087633	1	03/21/18 08:42	03/22/18 03:01	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1087677	100	03/23/18 10:00	03/26/18 18:11	MTJ

LIPPLEMAN-LF-5 L978863-05 Solid

			Collected by DK Nicholson	Collected date/time 03/18/18 10:10	Received date/time 03/20/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1087781	1	03/21/18 08:42	03/22/18 03:53	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1087677	20	03/23/18 10:00	03/26/18 16:47	MTJ

LIPPLEMAN-LF-6 L978863-06 Solid

			Collected by DK Nicholson	Collected date/time 03/18/18 10:15	Received date/time 03/20/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1087781	1	03/21/18 08:42	03/22/18 04:15	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1087677	100	03/23/18 10:00	03/26/18 19:33	MTJ

LIPPLEMAN-LF-7 L978863-07 Solid

			Collected by DK Nicholson	Collected date/time 03/18/18 10:20	Received date/time 03/20/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1087781	1	03/21/18 08:42	03/22/18 18:16	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1087677	100	03/23/18 10:00	03/26/18 19:45	MTJ

ACCOUNT:

HRM Resources, LLC - Denver, CO

PROJECT:

SDG:

L978863

DATE/TIME:

03/29/18 11:44

PAGE:

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LIPPLEMAN-LF-8 L978863-08 Solid

Collected by
DK Nicholson

Collected date/time
03/18/18 10:25

Received date/time
03/20/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1087781	1	03/21/18 08:42	03/22/18 04:59	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1087677	100	03/23/18 10:00	03/26/18 19:57	MTJ

¹ Cp² Tc³ Ss

LIPPLEMAN-LF-9 L978863-09 Solid

Collected by
DK Nicholson

Collected date/time
03/18/18 10:30

Received date/time
03/20/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1087781	1	03/21/18 08:42	03/22/18 05:21	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1087677	100	03/23/18 10:00	03/26/18 20:09	MTJ

⁴ Cn⁵ Sr⁶ Qc

LIPPLEMAN-LF-10 L978863-10 Solid

Collected by
DK Nicholson

Collected date/time
03/18/18 10:35

Received date/time
03/20/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1087781	1	03/21/18 08:42	03/22/18 05:44	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1087677	100	03/23/18 10:00	03/26/18 20:21	MTJ

⁷ Gl⁸ Al⁹ Sc

LIPPLEMAN-LF-11 L978863-11 Solid

Collected by
DK Nicholson

Collected date/time
03/18/18 10:40

Received date/time
03/20/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1087781	1	03/21/18 08:42	03/22/18 06:06	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1087677	100	03/23/18 10:00	03/26/18 20:33	MTJ



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.

Olivia Studebaker
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 mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00152	<u>B</u>	0.000500	1	03/22/2018 01:48	WG1087633
Toluene	ND		0.00500	1	03/22/2018 01:48	WG1087633
Ethylbenzene	ND		0.000500	1	03/22/2018 01:48	WG1087633
Total Xylene	ND		0.00150	1	03/22/2018 01:48	WG1087633
TPH (GC/FID) Low Fraction	ND		0.100	1	03/22/2018 01:48	WG1087633
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	80.3		77.0-120		03/22/2018 01:48	WG1087633
(S) <i>a,a,a</i> -Trifluorotoluene(PID)	84.7		75.0-128		03/22/2018 01:48	WG1087633

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	565		80.0	20	03/26/2018 16:35	WG1087677
C28-C40 Oil Range	684		80.0	20	03/26/2018 16:35	WG1087677
(S) <i>o</i> -Terphenyl	30.2	<u>J7</u>	18.0-148		03/26/2018 16:35	WG1087677

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.000597	<u>B</u>	0.000500	1	03/26/2018 19:26	WG1087633
Toluene	ND		0.00500	1	03/26/2018 19:26	WG1087633
Ethylbenzene	ND		0.000500	1	03/26/2018 19:26	WG1087633
Total Xylene	0.00205		0.00150	1	03/26/2018 19:26	WG1087633
TPH (GC/FID) Low Fraction	0.101		0.100	1	03/26/2018 19:26	WG1087633
(S) a,a,a-Trifluorotoluene(FID)	92.8		77.0-120		03/26/2018 19:26	WG1087633
(S) a,a,a-Trifluorotoluene(PID)	98.0		75.0-128		03/26/2018 19:26	WG1087633

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	2180		400	100	03/26/2018 17:47	WG1087677
C28-C40 Oil Range	2740		400	100	03/26/2018 17:47	WG1087677
(S) o-Terphenyl	0.000	<u>J7</u>	18.0-148		03/26/2018 17:47	WG1087677

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	03/26/2018 20:04	WG1087633
Toluene	ND		0.00500	1	03/26/2018 20:04	WG1087633
Ethylbenzene	ND		0.000500	1	03/26/2018 20:04	WG1087633
Total Xylene	0.00351		0.00150	1	03/26/2018 20:04	WG1087633
TPH (GC/FID) Low Fraction	0.229		0.100	1	03/26/2018 20:04	WG1087633
(S) a,a,a-Trifluorotoluene(FID)	94.6		77.0-120		03/26/2018 20:04	WG1087633
(S) a,a,a-Trifluorotoluene(PID)	99.5		75.0-128		03/26/2018 20:04	WG1087633

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	2910		400	100	03/26/2018 17:59	WG1087677
C28-C40 Oil Range	3150		400	100	03/26/2018 17:59	WG1087677
(S) o-Terphenyl	0.000	J7	18.0-148		03/26/2018 17:59	WG1087677

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 mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00141	<u>B</u>	0.000500	1	03/22/2018 03:01	WG1087633
Toluene	ND		0.00500	1	03/22/2018 03:01	WG1087633
Ethylbenzene	0.000711	<u>B</u>	0.000500	1	03/22/2018 03:01	WG1087633
Total Xylene	0.00188	<u>B</u>	0.00150	1	03/22/2018 03:01	WG1087633
TPH (GC/FID) Low Fraction	ND		0.100	1	03/22/2018 03:01	WG1087633
(S) a,a,a-Trifluorotoluene(FID)	83.8		77.0-120		03/22/2018 03:01	WG1087633
(S) a,a,a-Trifluorotoluene(PID)	88.4		75.0-128		03/22/2018 03:01	WG1087633

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	823		400	100	03/26/2018 18:11	WG1087677
C28-C40 Oil Range	1230		400	100	03/26/2018 18:11	WG1087677
(S) o-Terphenyl	0.000	<u>J7</u>	18.0-148		03/26/2018 18:11	WG1087677

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 mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00124		0.000500	1	03/22/2018 03:53	WG1087781
Toluene	ND		0.00500	1	03/22/2018 03:53	WG1087781
Ethylbenzene	ND		0.000500	1	03/22/2018 03:53	WG1087781
Total Xylene	ND		0.00150	1	03/22/2018 03:53	WG1087781
TPH (GC/FID) Low Fraction	ND		0.100	1	03/22/2018 03:53	WG1087781
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	88.6		77.0-120		03/22/2018 03:53	WG1087781
(S) <i>a,a,a</i> -Trifluorotoluene(PID)	89.6		75.0-128		03/22/2018 03:53	WG1087781

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	574		80.0	20	03/26/2018 16:47	WG1087677
C28-C40 Oil Range	767		80.0	20	03/26/2018 16:47	WG1087677
(S) <i>o</i> -Terphenyl	89.2	J7	18.0-148		03/26/2018 16:47	WG1087677

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 mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00143		0.000500	1	03/22/2018 04:15	WG1087781
Toluene	ND		0.00500	1	03/22/2018 04:15	WG1087781
Ethylbenzene	ND		0.000500	1	03/22/2018 04:15	WG1087781
Total Xylene	ND		0.00150	1	03/22/2018 04:15	WG1087781
TPH (GC/FID) Low Fraction	ND		0.100	1	03/22/2018 04:15	WG1087781
(S) a,a,a-Trifluorotoluene(FID)	80.7		77.0-120		03/22/2018 04:15	WG1087781
(S) a,a,a-Trifluorotoluene(PID)	82.2		75.0-128		03/22/2018 04:15	WG1087781

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	1230		400	100	03/26/2018 19:33	WG1087677
C28-C40 Oil Range	1500		400	100	03/26/2018 19:33	WG1087677
(S) o-Terphenyl	0.000	J7	18.0-148		03/26/2018 19:33	WG1087677

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 mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00126		0.000500	1	03/22/2018 18:16	WG1087781
Toluene	ND		0.00500	1	03/22/2018 18:16	WG1087781
Ethylbenzene	ND		0.000500	1	03/22/2018 18:16	WG1087781
Total Xylene	ND		0.00150	1	03/22/2018 18:16	WG1087781
TPH (GC/FID) Low Fraction	ND		0.100	1	03/22/2018 18:16	WG1087781
(S) a,a,a-Trifluorotoluene(FID)	83.8		77.0-120		03/22/2018 18:16	WG1087781
(S) a,a,a-Trifluorotoluene(PID)	88.5		75.0-128		03/22/2018 18:16	WG1087781

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	1210		400	100	03/26/2018 19:45	WG1087677
C28-C40 Oil Range	1610		400	100	03/26/2018 19:45	WG1087677
(S) o-Terphenyl	0.000	J7	18.0-148		03/26/2018 19:45	WG1087677

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 mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00142		0.000500	1	03/22/2018 04:59	WG1087781
Toluene	ND		0.00500	1	03/22/2018 04:59	WG1087781
Ethylbenzene	ND		0.000500	1	03/22/2018 04:59	WG1087781
Total Xylene	ND		0.00150	1	03/22/2018 04:59	WG1087781
TPH (GC/FID) Low Fraction	ND		0.100	1	03/22/2018 04:59	WG1087781
(S) a,a,a-Trifluorotoluene(FID)	84.1		77.0-120		03/22/2018 04:59	WG1087781
(S) a,a,a-Trifluorotoluene(PID)	85.3		75.0-128		03/22/2018 04:59	WG1087781

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	798		400	100	03/26/2018 19:57	WG1087677
C28-C40 Oil Range	1170		400	100	03/26/2018 19:57	WG1087677
(S) o-Terphenyl	0.000	J7	18.0-148		03/26/2018 19:57	WG1087677

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00168		0.000500	1	03/22/2018 05:21	WG1087781
Toluene	ND		0.00500	1	03/22/2018 05:21	WG1087781
Ethylbenzene	ND		0.000500	1	03/22/2018 05:21	WG1087781
Total Xylene	0.0378		0.00150	1	03/22/2018 05:21	WG1087781
TPH (GC/FID) Low Fraction	3.45		0.100	1	03/22/2018 05:21	WG1087781
(S) a,a,a-Trifluorotoluene(FID)	64.5	J2	77.0-120		03/22/2018 05:21	WG1087781
(S) a,a,a-Trifluorotoluene(PID)	65.8	J2	75.0-128		03/22/2018 05:21	WG1087781

Sample Narrative:

L978863-09 WG1087781: Surrogate failure due to matrix interference.

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	565		400	100	03/26/2018 20:09	WG1087677
C28-C40 Oil Range	661		400	100	03/26/2018 20:09	WG1087677
(S) o-Terphenyl	0.000	J7	18.0-148		03/26/2018 20:09	WG1087677

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.000500	1	03/22/2018 05:44	WG1087781
Toluene	ND		0.00500	1	03/22/2018 05:44	WG1087781
Ethylbenzene	ND		0.000500	1	03/22/2018 05:44	WG1087781
Total Xylene	ND		0.00150	1	03/22/2018 05:44	WG1087781
TPH (GC/FID) Low Fraction	ND		0.100	1	03/22/2018 05:44	WG1087781
(S) a,a,a-Trifluorotoluene(FID)	78.6		77.0-120		03/22/2018 05:44	WG1087781
(S) a,a,a-Trifluorotoluene(PID)	79.1		75.0-128		03/22/2018 05:44	WG1087781

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	809		400	100	03/26/2018 20:21	WG1087677
C28-C40 Oil Range	905		400	100	03/26/2018 20:21	WG1087677
(S) o-Terphenyl	0.000	J7	18.0-148		03/26/2018 20:21	WG1087677

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00203	J3 J6	0.000500	1	03/22/2018 06:06	WG1087781
Toluene	ND	J3 J6	0.00500	1	03/22/2018 06:06	WG1087781
Ethylbenzene	ND	J3 J6	0.000500	1	03/22/2018 06:06	WG1087781
Total Xylene	0.0490	J3 J6	0.00150	1	03/22/2018 06:06	WG1087781
TPH (GC/FID) Low Fraction	3.34	J3 J6	0.100	1	03/22/2018 06:06	WG1087781
(S) a,a,a-Trifluorotoluene(FID)	70.5	J2	77.0-120		03/22/2018 06:06	WG1087781
(S) a,a,a-Trifluorotoluene(PID)	77.3		75.0-128		03/22/2018 06:06	WG1087781

Sample Narrative:

L978863-11 WG1087781: Surrogate failure due to matrix interference.

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	1910		400	100	03/26/2018 20:33	WG1087677
C28-C40 Oil Range	1750		400	100	03/26/2018 20:33	WG1087677
(S) o-Terphenyl	0.000	J7	18.0-148		03/26/2018 20:33	WG1087677

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Method Blank (MB)

(MB) R3296441-5 03/22/18 00:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	0.000398	U	0.000120	0.000500
Toluene	0.000526	U	0.000150	0.00500
Ethylbenzene	0.000284	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)	102			77.0-120
(S) a,a,a-Trifluorotoluene(PID)	109			75.0-128

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) R3296441-1 03/21/18 22:34 • (LCSD) R3296441-2 03/21/18 22:58

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	0.0499	0.0536	99.8	107	71.0-121			7.11	20
Toluene	0.0500	0.0479	0.0509	95.8	102	72.0-120			6.14	20
Ethylbenzene	0.0500	0.0502	0.0542	100	108	76.0-121			7.66	20
Total Xylene	0.150	0.151	0.161	101	107	75.0-124			6.35	20
(S) a,a,a-Trifluorotoluene(FID)				103	103	77.0-120				
(S) a,a,a-Trifluorotoluene(PID)				108	109	75.0-128				

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

(LCS) R3296441-3 03/21/18 23:22 • (LCSD) R3296441-4 03/21/18 23:46

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	5.63	5.67	102	103	70.0-136			0.641	20
(S) a,a,a-Trifluorotoluene(FID)				108	108	77.0-120				
(S) a,a,a-Trifluorotoluene(PID)				121	120	75.0-128				



L978854-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L978854-01 03/22/18 10:27 • (MS) R3296441-6 03/22/18 10:51 • (MSD) R3296441-7 03/22/18 11:14

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 %
Benzene	0.0654	0.0919	0.624	0.664	32.5	35.0	25	10.0-146			6.26	29
Toluene	0.0654	0.0545	0.542	0.581	29.8	32.2	25	10.0-143			6.95	30
Ethylbenzene	0.0654	0.0238	0.548	0.591	32.0	34.7	25	10.0-147			7.60	31
Total Xylene	0.196	0.548	2.15	2.24	32.5	34.5	25	10.0-149	J6	J6	4.47	30
(S) a,a,a-Trifluorotoluene(FID)					102	102		77.0-120				
(S) a,a,a-Trifluorotoluene(PID)					110	109		75.0-128				

L978854-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L978854-01 03/22/18 10:27 • (MS) R3296441-8 03/22/18 11:38 • (MSD) R3296441-9 03/22/18 12:02

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 %
TPH (GC/FID) Low Fraction	7.20	7.21	60.2	64.6	29.4	31.9	25	10.0-147			7.19	30
(S) a,a,a-Trifluorotoluene(FID)					108	109		77.0-120				
(S) a,a,a-Trifluorotoluene(PID)					120	121		75.0-128				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3295272-5 03/21/18 22:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	U		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)	99.1			77.0-120
(S) a,a,a-Trifluorotoluene(PID)	99.0			75.0-128

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) R3295272-1 03/21/18 20:25 • (LCSD) R3295272-2 03/21/18 20:47

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	0.0522	0.0530	104	106	71.0-121			1.63	20
Toluene	0.0500	0.0537	0.0542	107	108	72.0-120			0.938	20
Ethylbenzene	0.0500	0.0534	0.0545	107	109	76.0-121			1.99	20
Total Xylene	0.150	0.161	0.163	107	109	75.0-124			1.54	20
(S) a,a,a-Trifluorotoluene(FID)				98.6	98.7	77.0-120				
(S) a,a,a-Trifluorotoluene(PID)				98.0	97.6	75.0-128				

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

(LCS) R3295272-3 03/21/18 21:10 • (LCSD) R3295272-4 03/21/18 21:32

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	5.91	5.76	107	105	70.0-136			2.43	20
(S) a,a,a-Trifluorotoluene(FID)				106	106	77.0-120				
(S) a,a,a-Trifluorotoluene(PID)				111	111	75.0-128				



L978863-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L978863-11 03/22/18 06:06 • (MS) R3295272-6 03/22/18 06:28 • (MSD) R3295272-7 03/22/18 06:51												
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	0.00203	0.00663	0.0102	9.21	16.3	1	10.0-146	J6	J3	42.1	29
Toluene	0.0500	ND	0.00481	0.00795	9.63	15.9	1	10.0-143	J6	J3	49.2	30
Ethylbenzene	0.0500	ND	0.00139	0.00346	2.78	6.93	1	10.0-147	J6	J3 J6	85.5	31
Total Xylene	0.150	0.0490	0.0278	0.0477	0.000	0.000	1	10.0-149	J6	J3 J6	52.8	30
(S) a,a,a-Trifluorotoluene(FID)					69.7	64.2		77.0-120	J2	J2		
(S) a,a,a-Trifluorotoluene(PID)					70.2	68.3		75.0-128	J2	J2		

Sample Narrative:
OS: Surrogate failure due to matrix interference.

L978863-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L978863-11 03/22/18 06:06 • (MS) R3295272-8 03/22/18 07:13 • (MSD) R3295272-9 03/22/18 07:35												
Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	3.34	3.50	6.84	2.88	63.6	1	10.0-147	J6	J3	64.6	30
(S) a,a,a-Trifluorotoluene(FID)					62.9	54.1		77.0-120	J2	J2		
(S) a,a,a-Trifluorotoluene(PID)					66.4	66.0		75.0-128	J2	J2		

Sample Narrative:
OS: Surrogate failure due to matrix interference.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3296320-1 03/24/18 06:11

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	83.3			18.0-148

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

(LCS) R3296320-2 03/24/18 06:22 • (LCSD) R3296320-3 03/24/18 06:35

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	30.1	34.0	60.3	68.0	50.0-150			12.0	20
(S) o-Terphenyl				114	128	18.0-148				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



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, 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.
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.

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.

* 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	TN2000002
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	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.



Company Name/Address: Nicholson GeoSolutions. LLC. 3433 E. Lake Dr. Centennial, CO 80121						Billing Information: Terry Pape HRM Resources II, LLC 410 17th Street, Suite 1600 Denver, CO 80202						Analysis / Container / Preservative										Chain of Custody Page <u> 1 </u> of <u> 1 </u>			
Report to: Dave Nicholson						Email To: dknicholson@q.com						TEPH(8015)Diesel & Oil Range (1) 4oz Clear-No Pres BTEX/TVPH (1) 4oz Clear - No Pres												ESC L.A.B S.C.I.E.N.C.E.S YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 	
Project Description: HRM Landfarm Sampling						City/State Collected: Client Project # Lab Project # 																			
Phone: 303-601-2023 Fax:						Site/Facility ID # P.O. # 																			
Collected by (print): 						Date Results Needed 																			
Collected by (signature): Immediately Packed on Ice N <u> Y </u>						<u> Rush? </u> (Lab MUST Be Notified) Same Day 200% Next Day 100% Two Day 50% Three Day 25%						Email? <u> No </u> <u> Yes </u> FAX? <u> X </u> <u> No </u> <u> Yes </u> No. of Cntrs						L# <u> 1978863 </u> T <u> C134 </u> Acctnum: HRMRESDCO Template: Prelogin: TSR: Cooler: Shipped Via:							
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs														Rem./Contaminant	Sample # (lab only)				
Lipplemann-LF-1		SS		3/18	0950	2	X	X													-01				
Lipplemann-LF-2		SS			0955	2	X	X													-02				
Lipplemann-LF-3		SS			1000	2	X	X													-03				
Lipplemann-LF-4		SS			1005	2	X	X													-04				
Lipplemann-LF-5		SS			1010	2	X	X													-05				
Lipplemann-LF-6		SS			1015	2	X	X													-06				
Lipplemann-LF-7		SS			1020	2	X	X													-07				
Lipplemann-LF-8		SS			1025	2	X	X													-08				
Lipplemann-LF-9		SS			1030	2	X	X													-09				
Lipplemann-LF-10		SS			1035	2	X	X													-10				
Lipplemann-LF-11		SS			1040	2	X	X													-11				
Matrix: SS - Soil GW - Groundwater WW - Wastewater DW - Drinking Water OT - Other																					pH _____ Temp _____ Flow _____ Other _____		Hold # Condition: (lab use only) OK COC Seal Intact: <u> Y </u> <u> N </u> <u> NA </u> pH Checked: _____ NCF: _____		
Remarks:																		Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/>							
Relinquished by: (Signature)				Date: 3/19/18		Time: 1500		Received by: (Signature)				Temp: °C Bottles Received: 22x4ozd													
Relinquished by: (Signature)				Date:		Time:		Received by: (Signature)				Date: 3/20/18 Time: 0845													
Relinquished by: (Signature)				Date:		Time:		Received for lab by: (Signature)																	

ESC LAB SCIENCES

Cooler Receipt Form

Client: <u>HRM RESDCO</u>	SDG#	<u>L978863</u>	
Cooler Received/Opened On: <u>3/20/18</u>	Temperature:	<u>0.9</u>	
Received By: <u>Kelly Mercer</u>			
Signature: <u>[Signature]</u>			
Receipt Check List			
	NP	Yes	No
COC Seal Present / Intact?	<input checked="" type="checkbox"/>		
COC Signed / Accurate?		<input checked="" type="checkbox"/>	
Bottles arrive intact?		<input checked="" type="checkbox"/>	
Correct bottles used?		<input checked="" type="checkbox"/>	
Sufficient volume sent?		<input checked="" type="checkbox"/>	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			