



Nicholson GeoSolutions LLC

3433 East Lake Drive
Centennial, CO 80121

June 21, 2018

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

Subject: Long Ridge J-15 Landfarm Screening Soil Sample Results

Dear Derek:

Nicholson GeoSolutions LLC conducted screening level soil sampling of the two landfarms on the J-15 well pad on Long Ridge, Garfield County, Colorado. Previous GPS mapping showed that the south landfarm (now the northeast landfarm) covers about 0.5 acres and contains an estimated 1,900 yards of material. The north landfarm was recently constructed from material excavated from the former reserve pit on the well pad and contains about 1,000 yards of material.

Sampling of both landfarms was conducted on May 23rd, 2018. Each sample was composited from 12 subsamples collected at depths of about 12-18 inches across the surface of the landfarm. Both samples were 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. SAR, pH, conductivity, and metals were previously analyzed for these landfarms. The laboratory report is attached.

All results were below the standards for both landfarms. For the original northeast landfarm (sample J15), TPH was reported at 7.28 mg/kg and benzo(a)pyrene was not detected. For the north landfarm (sample LR J15-N), TPH was reported at 12.6 mg/kg and benzo(a)pyrene was reported at 0.0105 mg/kg. Both landfarms are now ready for final composite sampling.

Nicholson GeoSolutions LLC

A handwritten signature in blue ink that reads "DK Nicholson".

David K. Nicholson, P.G.
Principal Geologist

APPENDIX A
Laboratory Report

Berry Petroleum - Denver, CO

Sample Delivery Group: L997761
Samples Received: 05/30/2018
Project Number:
Description: North Parachute Landfarms

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

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.



Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
J-15 L997761-01	5
J-15-N L997761-02	6
M-15 L997761-03	7
Qc: Quality Control Summary	8
Volatile Organic Compounds (GC) by Method 8015/8021	8
Semi-Volatile Organic Compounds (GC) by Method 8015	10
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	11
Gl: Glossary of Terms	13
Al: Accreditations & Locations	14
Sc: Sample Chain of Custody	15





J-15 L997761-01 Solid

Collected by
DK NicholsonCollected date/time
05/23/18 14:20Received date/time
05/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1119566	1	05/31/18 11:31	06/04/18 19:07	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1118913	1	06/01/18 12:59	06/02/18 01:19	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1118351	1	06/02/18 23:52	06/03/18 18:53	KM

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

J-15-N L997761-02 Solid

Collected by
DK NicholsonCollected date/time
05/23/18 14:40Received date/time
05/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1119566	1	05/31/18 11:31	06/04/18 19:30	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1118913	1	06/01/18 12:59	06/02/18 01:32	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1118351	1	06/02/18 23:52	06/03/18 19:14	KM

M-15 L997761-03 Solid

Collected by
DK NicholsonCollected date/time
05/23/18 15:10Received date/time
05/30/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015/8021	WG1119566	1	05/31/18 11:31	06/04/18 19:52	DWR
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1118913	5	06/01/18 12:59	06/02/18 02:26	DMW
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1118351	1	06/02/18 23:52	06/03/18 19:35	KM



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	0.00162		0.000500	1	06/04/2018 19:07	WG1119566
Toluene	ND		0.00500	1	06/04/2018 19:07	WG1119566
Ethylbenzene	ND		0.000500	1	06/04/2018 19:07	WG1119566
Total Xylene	ND		0.00150	1	06/04/2018 19:07	WG1119566
TPH (GC/FID) Low Fraction	ND		0.100	1	06/04/2018 19:07	WG1119566
(S) a,a,a-Trifluorotoluene(FID)	95.8		77.0-120		06/04/2018 19:07	WG1119566
(S) a,a,a-Trifluorotoluene(PID)	96.3		75.0-128		06/04/2018 19:07	WG1119566

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

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	7.28		4.00	1	06/02/2018 01:19	WG1118913
C28-C40 Oil Range	ND		4.00	1	06/02/2018 01:19	WG1118913
(S) o-Terphenyl	91.8		18.0-148		06/02/2018 01:19	WG1118913

6 Qc

7 Gl

8 Al

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	06/03/2018 18:53	WG1118351
Acenaphthene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Acenaphthylene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Benzo(a)anthracene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Benzo(a)pyrene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Benzo(b)fluoranthene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Benzo(g,h,i)perylene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Benzo(k)fluoranthene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Chrysene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Dibenz(a,h)anthracene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Fluoranthene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Fluorene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Naphthalene	ND		0.0200	1	06/03/2018 18:53	WG1118351
Phenanthrene	ND		0.00600	1	06/03/2018 18:53	WG1118351
Pyrene	ND		0.00600	1	06/03/2018 18:53	WG1118351
1-Methylnaphthalene	ND		0.0200	1	06/03/2018 18:53	WG1118351
2-Methylnaphthalene	ND		0.0200	1	06/03/2018 18:53	WG1118351
2-Chloronaphthalene	ND		0.0200	1	06/03/2018 18:53	WG1118351
(S) p-Terphenyl-d14	73.4		23.0-120		06/03/2018 18:53	WG1118351
(S) Nitrobenzene-d5	95.5		14.0-149		06/03/2018 18:53	WG1118351
(S) 2-Fluorobiphenyl	81.2		34.0-125		06/03/2018 18:53	WG1118351

9 Sc



Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	0.00164		0.000500	1	06/04/2018 19:30	WG1119566
Toluene	ND		0.00500	1	06/04/2018 19:30	WG1119566
Ethylbenzene	0.000998		0.000500	1	06/04/2018 19:30	WG1119566
Total Xylene	0.00160	<u>B</u>	0.00150	1	06/04/2018 19:30	WG1119566
TPH (GC/FID) Low Fraction	ND		0.100	1	06/04/2018 19:30	WG1119566
(S) a,a,a-Trifluorotoluene(FID)	95.5		77.0-120		06/04/2018 19:30	WG1119566
(S) a,a,a-Trifluorotoluene(PID)	96.7		75.0-128		06/04/2018 19:30	WG1119566

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr

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	12.6		4.00	1	06/02/2018 01:32	WG1118913
C28-C40 Oil Range	ND		4.00	1	06/02/2018 01:32	WG1118913
(S) o-Terphenyl	87.7		18.0-148		06/02/2018 01:32	WG1118913

⁶ Qc⁷ Gl⁸ Al

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	06/03/2018 19:14	WG1118351
Acenaphthene	ND		0.00600	1	06/03/2018 19:14	WG1118351
Acenaphthylene	ND		0.00600	1	06/03/2018 19:14	WG1118351
Benzo(a)anthracene	ND		0.00600	1	06/03/2018 19:14	WG1118351
Benzo(a)pyrene	ND		0.00600	1	06/03/2018 19:14	WG1118351
Benzo(b)fluoranthene	0.0105		0.00600	1	06/03/2018 19:14	WG1118351
Benzo(g,h,i)perylene	0.00812		0.00600	1	06/03/2018 19:14	WG1118351
Benzo(k)fluoranthene	ND		0.00600	1	06/03/2018 19:14	WG1118351
Chrysene	0.00682		0.00600	1	06/03/2018 19:14	WG1118351
Dibenz(a,h)anthracene	ND		0.00600	1	06/03/2018 19:14	WG1118351
Fluoranthene	0.00735		0.00600	1	06/03/2018 19:14	WG1118351
Fluorene	ND		0.00600	1	06/03/2018 19:14	WG1118351
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	06/03/2018 19:14	WG1118351
Naphthalene	ND		0.0200	1	06/03/2018 19:14	WG1118351
Phenanthrene	0.00835		0.00600	1	06/03/2018 19:14	WG1118351
Pyrene	0.0115		0.00600	1	06/03/2018 19:14	WG1118351
1-Methylnaphthalene	ND		0.0200	1	06/03/2018 19:14	WG1118351
2-Methylnaphthalene	0.0379		0.0200	1	06/03/2018 19:14	WG1118351
2-Chloronaphthalene	ND		0.0200	1	06/03/2018 19:14	WG1118351
(S) p-Terphenyl-d14	72.3		23.0-120		06/03/2018 19:14	WG1118351
(S) Nitrobenzene-d5	92.7		14.0-149		06/03/2018 19:14	WG1118351
(S) 2-Fluorobiphenyl	76.3		34.0-125		06/03/2018 19:14	WG1118351

⁹ Sc



Method Blank (MB)

(MB) R3315747-5 06/04/18 12:30

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)	100			77.0-120
(S) a,a,a-Trifluorotoluene(PID)	100			75.0-128

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Cp

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Tc

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

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

(LCS) R3315747-1 06/04/18 10:38 • (LCSD) R3315747-2 06/04/18 11:00

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	0.0532	0.0534	106	107	71.0-121			0.475	20
Toluene	0.0500	0.0550	0.0543	110	109	72.0-120			1.23	20
Ethylbenzene	0.0500	0.0545	0.0548	109	110	76.0-121			0.677	20
Total Xylene	0.150	0.163	0.164	109	110	75.0-124			0.856	20
(S) a,a,a-Trifluorotoluene(FID)				99.8	100	77.0-120				
(S) a,a,a-Trifluorotoluene(PID)				98.0	99.9	75.0-128				

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

(LCS) R3315747-3 06/04/18 11:23 • (LCSD) R3315747-4 06/04/18 11:45

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	6.31	6.32	115	115	70.0-136			0.166	20
(S) a,a,a-Trifluorotoluene(FID)				106	105	77.0-120				
(S) a,a,a-Trifluorotoluene(PID)				109	110	75.0-128				



L997766-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L997766-02 06/04/18 20:37 • (MS) R3315747-6 06/04/18 20:59 • (MSD) R3315747-7 06/04/18 21:21

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	0.00107	0.0333	0.0315	64.6	60.8	1	10.0-146			5.73	29
Toluene	0.0500	ND	0.0291	0.0272	54.4	50.5	1	10.0-143			6.87	30
Ethylbenzene	0.0500	0.000825	0.0216	0.0201	41.5	38.6	1	10.0-147			6.82	31
Total Xylene	0.150	ND	0.0596	0.0565	38.8	36.7	1	10.0-149	J6	J6	5.34	30
(S) a,a,a-Trifluorotoluene(FID)					93.6	92.6		77.0-120				
(S) a,a,a-Trifluorotoluene(PID)					93.7	92.4		75.0-128				

L997766-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L997766-02 06/04/18 20:37 • (MS) R3315747-8 06/04/18 21:43 • (MSD) R3315747-9 06/04/18 22:05

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	ND	1.97	2.56	35.9	46.6	1	10.0-147			25.9	30
(S) a,a,a-Trifluorotoluene(FID)					94.3	94.1		77.0-120				
(S) a,a,a-Trifluorotoluene(PID)					98.1	98.4		75.0-128				

1
Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Method Blank (MB)

(MB) R3314863-1 06/02/18 00:39

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	108			18.0-148

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

(LCS) R3314863-2 06/02/18 00:54 • (LCSD) R3314863-3 06/02/18 01:07

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	44.9	41.8	89.9	83.5	50.0-150			7.33	20
(S) o-Terphenyl				111	105	18.0-148				

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Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Method Blank (MB)

(MB) R3315549-3 06/03/18 15:43

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	112			14.0-149
(S) 2-Fluorobiphenyl	94.2			34.0-125
(S) p-Terphenyl-d14	85.2			23.0-120

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3315549-1 06/03/18 15:01 • (LCSD) R3315549-2 06/03/18 15:22

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	0.0744	0.0736	93.0	92.0	50.0-125			1.08	20
Acenaphthene	0.0800	0.0650	0.0664	81.3	83.0	52.0-120			2.10	20
Acenaphthylene	0.0800	0.0688	0.0703	86.1	87.9	51.0-120			2.11	20
Benzo(a)anthracene	0.0800	0.0661	0.0672	82.6	84.0	46.0-121			1.64	20
Benzo(a)pyrene	0.0800	0.0573	0.0513	71.7	64.1	42.0-121			11.2	20
Benzo(b)fluoranthene	0.0800	0.0654	0.0662	81.7	82.8	42.0-123			1.27	20
Benzo(g,h,i)perylene	0.0800	0.0643	0.0650	80.4	81.2	43.0-128			0.981	20
Benzo(k)fluoranthene	0.0800	0.0689	0.0696	86.1	87.0	45.0-128			0.950	20
Chrysene	0.0800	0.0700	0.0722	87.5	90.2	48.0-127			3.07	20
Dibenz(a,h)anthracene	0.0800	0.0646	0.0653	80.7	81.6	43.0-132			1.10	20
Fluoranthene	0.0800	0.0748	0.0767	93.5	95.9	49.0-129			2.51	20

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

(LCS) R3315549-1 06/03/18 15:01 • (LCSD) R3315549-2 06/03/18 15:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	0.0800	0.0714	0.0723	89.2	90.4	50.0-120			1.34	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0642	0.0651	80.3	81.4	44.0-131			1.38	20
Naphthalene	0.0800	0.0654	0.0661	81.8	82.6	50.0-120			1.02	20
Phenanthrene	0.0800	0.0701	0.0704	87.6	88.0	48.0-120			0.385	20
Pyrene	0.0800	0.0634	0.0638	79.3	79.8	48.0-135			0.614	20
1-Methylnaphthalene	0.0800	0.0725	0.0734	90.6	91.8	52.0-122			1.32	20
2-Methylnaphthalene	0.0800	0.0695	0.0706	86.9	88.2	52.0-120			1.51	20
2-Chloronaphthalene	0.0800	0.0676	0.0686	84.6	85.8	50.0-120			1.45	20
(S) Nitrobenzene-d5				105	110	14.0-149				
(S) 2-Fluorobiphenyl				89.0	92.7	34.0-125				
(S) p-Terphenyl-d14				82.6	83.7	23.0-120				

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

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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

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.



