

HRL Compliance Solutions- CO

Sample Delivery Group: L847684
Samples Received: 07/16/2016
Project Number: LIFT 1 MONITORING SA
Description: Black Hills - Whittaker Flats D-17
Site: WF D-17
Report To: Jordan Cario
2385 F ½ Road
Grand Junction, CO 81505

Entire Report Reviewed By:



Shane Gambill

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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¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



LIFT 1 MONITORING SAMPLE (PAH) L847684-01 Solid

Collected by
Jordan Cario

Collected date/time
07/15/16 09:00

Received date/time
07/16/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG889712	20	07/17/16 22:29	07/18/16 13:29	KMP
Semi-Volatile Organic Compounds (GC) by Method 8015	WG890971	20	07/20/16 19:37	07/21/16 11:28	DMG

¹Cp

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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.

Shane Gambill
Technical Service Representative

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Collected date/time: 07/15/16 09:00

L847684

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	1960		80.0	20	07/21/2016 11:28	WG890971
C28-C40 Oil Range	293		80.0	20	07/21/2016 11:28	WG890971
(S) o-Terphenyl	0.000	J7	50.0-150		07/21/2016 11:28	WG890971

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	0.202		0.120	20	07/18/2016 13:29	WG889712
Dibenz(a,h)anthracene	0.142		0.120	20	07/18/2016 13:29	WG889712
(S) p-Terphenyl-d14	85.6	J7	32.2-131		07/18/2016 13:29	WG889712
(S) Nitrobenzene-d5	58.9	J7	22.1-146		07/18/2016 13:29	WG889712
(S) 2-Fluorobiphenyl	71.4	J7	40.6-122		07/18/2016 13:29	WG889712

Sample Narrative:

8270C-SIM L847684-01 WG889712: Dilution due to matrix

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

L847684-01

Method Blank (MB)

(MB) R3151514-1 07/21/16 10:44

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	104			50.0-150

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

(LCS) R3151514-2 07/21/16 10:58 • (LCSD) R3151514-3 07/21/16 11:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	60.0	46.4	47.0	77.4	78.3	50.0-150			1.24	20
(S) o-Terphenyl				105	104	50.0-150				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3150395-3 07/18/16 04:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzo(a)pyrene	U		0.000600	0.00600
Dibenz(a,h)anthracene	U		0.000600	0.00600
(S) p-Terphenyl-d14	83.0			32.2-131
(S) Nitrobenzene-d5	66.9			22.1-146
(S) 2-Fluorobiphenyl	78.9			40.6-122

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

(LCS) R3150395-1 07/18/16 04:13 • (LCSD) R3150395-2 07/18/16 04:35

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 %
Benzo(a)pyrene	0.0800	0.0775	0.0743	96.8	92.8	42.3-119			4.23	20
Dibenz(a,h)anthracene	0.0800	0.0700	0.0673	87.5	84.1	44.8-133			3.94	20
(S) p-Terphenyl-d14				85.9	84.5	32.2-131				
(S) Nitrobenzene-d5				82.2	79.6	22.1-146				
(S) 2-Fluorobiphenyl				84.2	83.9	40.6-122				

L847612-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L847612-05 07/18/16 12:04 • (MS) R3150395-4 07/18/16 12:25 • (MSD) R3150395-5 07/18/16 12:47

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 %
Benzo(a)pyrene	0.0160	ND	0.106	0.0925	100	82.9	5	16.9-135			14.0	25.2
Dibenz(a,h)anthracene	0.0160	ND	0.0637	0.0621	72.9	70.8	5	18.5-138			2.64	24.3
(S) p-Terphenyl-d14					77.0	76.1		32.2-131				
(S) Nitrobenzene-d5					75.8	75.3		22.1-146				
(S) 2-Fluorobiphenyl					76.9	75.6		40.6-122				



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
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
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ 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		

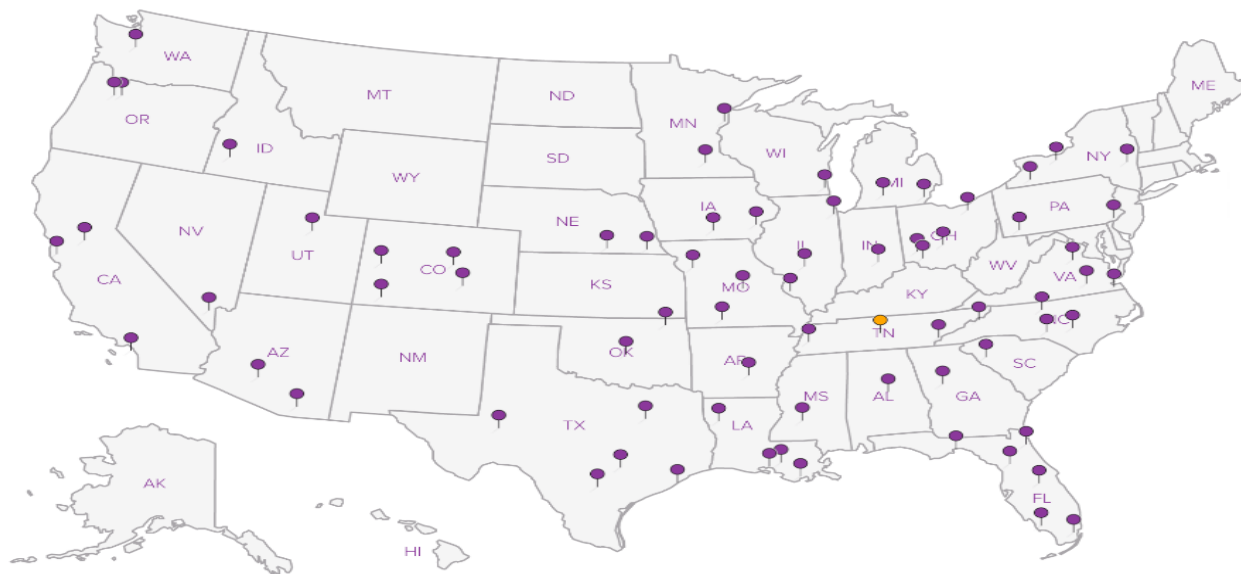
Third Party & Federal Accreditations

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.**



¹ Cp

² Tc

³ Ss

⁴ Cn

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⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

[illegible]

Data File : C:\MSDCHEM\1\DATA\072116\0721 14.D

Vial: 12

Acq On : 21 Jul 2016 11:28 am

Operator: 765

Sample : L847684-01 20x WG890971 12.5-5

Inst : SVGC2

Misc : soil

Multiplr: 0.80

IntFile : EVENTS.E

Quant Time: Jul 22 8:26 2016 Quant Results File: EP02G07P.RES

Quant Method : C:\MSDCHEM\1\METHODS\EP02G07P.M (Chemstation Integrator)

Title :

Last Update : Thu Jul 07 17:34:51 2016

Response via : Single Level Calibration

DataAcq Meth : RACER10.M

Volume Inj. :

Signal Phase :

Signal Info :

