REM 8820
Pit Facility ID 118933
API# 067-06101
Document 2527095

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Analytical Laboratory

Analytical Report

Report Summary

Client: Williford Resources, LLC
Chain Of Custody Number:
Samples Received: 10/6/2016 11:10:00AM
Job Number: 14057-0001
Work Order: P610007
Project Name/Location: L&S #6

Report Reviewed By: _____ Date: 10/17/16
Walter Hinchman, Laboratory Director

_____ Date: 10/17/16
Tim Cain, Quality Assurance Officer

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
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Williford Resources, LLC	Project Name:	L&S #6	
6506 S. Lewis Ave. Ste. 102	Project Number:	14057-0001	**Reported:**
Tulsa OK, 74136	Project Manager:	Glenn Stevens	17-Oct-16 12:51

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
L & S #6 Pit	P610007-01A	Soil	10/06/16	10/06/16	Glass Jar, 4 oz.
	P610007-01B	Soil	10/06/16	10/06/16	Glass Jar, 2 oz.

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6506 S. Lewis Ave. Ste. 102	Project Number:	14057-0001	**Reported:**
Tulsa OK, 74136	Project Manager:	Glenn Stevens	17-Oct-16 12:51

L & S #6 Pit

P610007-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1641022	10/07/16	10/11/16	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1642013	10/13/16	10/13/16	EPA 8015D	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*101 %*	*50-150*		*1641022*	*10/07/16*	*10/11/16*	*EPA 8015D*	
Surrogate: n-Nonane		*111 %*	*50-200*		*1642013*	*10/13/16*	*10/13/16*	*EPA 8015D*	
Total Metals by 6010									
Arsenic	**5.89**	1.00	mg/kg	1	1642003	10/10/16	10/11/16	EPA 6010C	
Barium	**257**	10.0	mg/kg	1	1642003	10/10/16	10/11/16	EPA 6010C	
Cadmium	ND	1.00	mg/kg	1	1642003	10/10/16	10/11/16	EPA 6010C	
Chromium	**23.0**	5.00	mg/kg	1	1642003	10/10/16	10/11/16	EPA 6010C	
Copper	**5.67**	2.00	mg/kg	1	1642003	10/10/16	10/11/16	EPA 6010C	
Lead	**5.08**	1.00	mg/kg	1	1642003	10/10/16	10/11/16	EPA 6010C	
Mercury	**1.05**	1.00	mg/kg	1	1642003	10/10/16	10/11/16	EPA 6010C	
Nickel	**11.6**	1.00	mg/kg	1	1642003	10/10/16	10/11/16	EPA 6010C	
Selenium	ND	5.00	mg/kg	1	1642003	10/10/16	10/11/16	EPA 6010C	
Silver	ND	1.00	mg/kg	1	1642003	10/10/16	10/11/16	EPA 6010C	
Zinc	**31.9**	2.00	mg/kg	1	1642003	10/10/16	10/11/16	EPA 6010C	
Cation/Anion Analysis									
pH @25°C	**8.50**		pH Units	1	1642007	10/10/16	10/10/16	EPA 9045D	
Electrical Conductivity	**218**		umhos/cm	1	1642006	10/10/16	10/10/16	9050A/2510	
Sodium Absorption Ratio	**0.455**		N/A	1	1642009	10/12/16	10/12/16	[CALC]	
Calcium	**4.52**	0.50	mg/L	1	1642008	10/10/16	10/11/16	EPA 6010C	
Magnesium	**1.04**	0.20	mg/L	1	1642008	10/10/16	10/11/16	EPA 6010C	
Sodium	**4.13**	2.00	mg/L	1	1642008	10/10/16	10/11/16	EPA 6010C	

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6506 S. Lewis Ave. Ste. 102	Project Number:	14057-0001	**Reported:**
Tulsa OK, 74136	Project Manager:	Glenn Stevens	17-Oct-16 12:51

Nonhalogenated Organics by 8015 - Quality Control

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1641022 - Purge and Trap EPA 5030A										
Blank (1641022-BLK1)				Prepared: 07-Oct-16 Analyzed: 11-Oct-16						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.70*		"	*8.00*		*96.3*	*50-150*			
LCS (1641022-BS1)				Prepared: 07-Oct-16 Analyzed: 11-Oct-16						
Gasoline Range Organics (C6-C10)	61.5	20.0	mg/kg	60.9		101	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.93*		"	*8.00*		*99.2*	*50-150*			
LCS Dup (1641022-BSD1)				Prepared: 07-Oct-16 Analyzed: 11-Oct-16						
Gasoline Range Organics (C6-C10)	62.0	20.0	mg/kg	60.9		102	70-130	0.810	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*7.56*		"	*8.00*		*94.5*	*50-150*			

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Tulsa OK, 74136	Project Manager:	Glenn Stevens	17-Oct-16 12:51

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1642013 - DRO Extraction EPA 3570										
Blank (1642013-BLK1)				Prepared & Analyzed: 13-Oct-16						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Surrogate: n-Nonane	*54.4*		*"*	*50.0*		*109*	*50-200*			
LCS (1642013-BS1)				Prepared & Analyzed: 13-Oct-16						
Diesel Range Organics (C10-C28)	441	25.0	mg/kg	500		88.1	38-132			
Surrogate: n-Nonane	*54.6*		*"*	*50.0*		*109*	*50-200*			
Matrix Spike (1642013-MS1)		**Source: P610012-01**		Prepared & Analyzed: 13-Oct-16						
Diesel Range Organics (C10-C28)	467	25.0	mg/kg	500	ND	93.4	38-132			
Surrogate: n-Nonane	*52.9*		*"*	*50.0*		*106*	*50-200*			
Matrix Spike Dup (1642013-MSD1)		**Source: P610012-01**		Prepared & Analyzed: 13-Oct-16						
Diesel Range Organics (C10-C28)	469	25.0	mg/kg	500	ND	93.8	38-132	0.394	20	
Surrogate: n-Nonane	*53.4*		*"*	*50.0*		*107*	*50-200*			

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Williford Resources, LLC	Project Name:	L&S #6	
6506 S. Lewis Ave. Ste. 102	Project Number:	14057-0001	**Reported:**
Tulsa OK, 74136	Project Manager:	Glenn Stevens	17-Oct-16 12:51

Total Metals by 6010 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1642003 - Metal Solid Digestion EPA 3051A										
Blank (1642003-BLK1)				Prepared: 10-Oct-16 Analyzed: 11-Oct-16						
Arsenic	ND	1.00	mg/kg							
Barium	ND	10.0	"							
Cadmium	ND	1.00	"							
Chromium	ND	5.00	"							
Copper	ND	2.00	"							
Lead	ND	1.00	"							
Mercury	ND	1.00	"							
Nickel	ND	1.00	"							
Selenium	ND	5.00	"							
Silver	ND	1.00	"							
Zinc	ND	2.00	"							
LCS (1642003-BS1)				Prepared: 10-Oct-16 Analyzed: 11-Oct-16						
Arsenic	93.6	1.00	mg/kg	100		93.6	80-120			
Barium	104	10.0	"	100		104	80-120			
Cadmium	96.2	1.00	"	100		96.2	80-120			
Chromium	97.3	5.00	"	100		97.3	80-120			
Copper	94.0	2.00	"	100		94.0	80-120			
Lead	91.7	1.00	"	100		91.7	80-120			
Mercury	114	1.00	"	100		114	80-120			
Nickel	96.7	1.00	"	100		96.7	80-120			
Selenium	91.9	5.00	"	100		91.9	80-120			
Silver	92.9	1.00	"	100		92.9	80-120			
Zinc	95.5	2.00	"	100		95.5	80-120			
Matrix Spike (1642003-MS1)		**Source: P610007-01**		Prepared: 10-Oct-16 Analyzed: 11-Oct-16						
Arsenic	96.4	1.00	mg/kg	100	5.89	90.5	75-125			
Barium	398	10.0	"	100	257	141	75-125			SPK1
Cadmium	90.8	1.00	"	100	ND	90.8	75-125			
Chromium	120	5.00	"	100	23.0	96.8	75-125			
Copper	96.3	2.00	"	100	5.67	90.6	75-125			
Lead	90.0	1.00	"	100	5.08	84.9	75-125			
Mercury	113	1.00	"	100	1.05	112	75-125			
Nickel	103	1.00	"	100	11.6	91.5	75-125			
Selenium	88.5	5.00	"	100	ND	88.5	75-125			
Silver	83.6	1.00	"	100	ND	83.6	75-125			
Zinc	126	2.00	"	100	31.9	93.9	75-125			

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Williford Resources, LLC	Project Name:	L&S #6	
6506 S. Lewis Ave. Ste. 102	Project Number:	14057-0001	**Reported:**
Tulsa OK, 74136	Project Manager:	Glenn Stevens	17-Oct-16 12:51

Total Metals by 6010 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1642003 - Metal Solid Digestion EPA 3051A										
Matrix Spike Dup (1642003-MSD1)		**Source: P610007-01**		Prepared: 10-Oct-16	Analyzed: 11-Oct-16					
Arsenic	96.0	1.00	mg/kg	100	5.89	90.1	75-125	0.436	20	
Barium	362	10.0	"	100	257	105	75-125	9.56	20	
Cadmium	90.7	1.00	"	100	ND	90.7	75-125	0.143	20	
Chromium	121	5.00	"	100	23.0	98.2	75-125	1.16	20	
Copper	95.7	2.00	"	100	5.67	90.0	75-125	0.625	20	
Lead	89.4	1.00	"	100	5.08	84.3	75-125	0.602	20	
Mercury	108	1.00	"	100	1.05	107	75-125	4.60	20	
Nickel	101	1.00	"	100	11.6	89.7	75-125	1.76	20	
Selenium	88.0	5.00	"	100	ND	88.0	75-125	0.521	20	
Silver	12.8	1.00	"	100	ND	12.8	75-125	147	20	D1, SPK1
Zinc	125	2.00	"	100	31.9	93.2	75-125	0.558	20	

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Williford Resources, LLC	Project Name:	L&S #6	
6506 S. Lewis Ave. Ste. 102	Project Number:	14057-0001	**Reported:**
Tulsa OK, 74136	Project Manager:	Glenn Stevens	17-Oct-16 12:51

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1642006 - Anion Extraction EPA 300.0										
Duplicate (1642006-DUP1)		**Source: P610007-01**		Prepared & Analyzed: 10-Oct-16						
Electrical Conductivity	211		umhos/cm		218			3.26	20	

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Williford Resources, LLC	Project Name:	L&S #6	
6506 S. Lewis Ave. Ste. 102	Project Number:	14057-0001	**Reported:**
Tulsa OK, 74136	Project Manager:	Glenn Stevens	17-Oct-16 12:51

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1642007 - Anion Extraction EPA 300.0										
LCS (1642007-BS1)				Prepared & Analyzed: 10-Oct-16						
pH	7.95		pH Units	8.00		99.4	98.75-101.25			
Duplicate (1642007-DUP1)		**Source: P610007-01**		Prepared & Analyzed: 10-Oct-16						
pH	8.50		pH Units		8.50			0.00	20	

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Williford Resources, LLC	Project Name:	L&S #6	
6506 S. Lewis Ave. Ste. 102	Project Number:	14057-0001	**Reported:**
Tulsa OK, 74136	Project Manager:	Glenn Stevens	17-Oct-16 12:51

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1642008 - Metal Water Digestion EPA 3015A										
Blank (1642008-BLK1)				Prepared: 10-Oct-16 Analyzed: 11-Oct-16						
Calcium	ND	0.50	mg/L							
Magnesium	ND	0.20	"							
Sodium	ND	2.00	"							
LCS (1642008-BS1)				Prepared: 10-Oct-16 Analyzed: 11-Oct-16						
Calcium	96.8	0.50	mg/L	100		96.8	80-120			
Magnesium	95.4	0.20	"	100		95.4	80-120			
Sodium	96.0	2.00	"	100		96.0	80-120			
Matrix Spike (1642008-MS1)		**Source: P610007-01**		Prepared: 10-Oct-16 Analyzed: 11-Oct-16						
Calcium	103	0.50	mg/L	100	4.52	98.9	75-125			
Magnesium	100	0.20	"	100	1.04	99.2	75-125			
Sodium	99.8	2.00	"	100	4.13	95.7	75-125			
Matrix Spike Dup (1642008-MSD1)		**Source: P610007-01**		Prepared: 10-Oct-16 Analyzed: 11-Oct-16						
Calcium	107	0.50	mg/L	100	4.52	102	75-125	3.39	20	
Magnesium	103	0.20	"	100	1.04	102	75-125	2.33	20	
Sodium	102	2.00	"	100	4.13	97.9	75-125	2.20	20	

Williford Resources, LLC	Project Name:	L&S #6	
6506 S. Lewis Ave. Ste. 102	Project Number:	14057-0001	**Reported:**
Tulsa OK, 74136	Project Manager:	Glenn Stevens	17-Oct-16 12:51

Notes and Definitions

SPK1	The spike recovery is outside of quality control limits.
D1	Duplicates or Matrix Spike Duplicates Relative Percent Difference is outside of control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Client: Williford Resources
Project: L+S #6
Sampler: Glenn Stevens
Phone: 970-749-0192
Email(s): Glenn Stevens@centurylink.net
Project Manager: Glenn Stevens

RUSH?
☐ 1d
☐ 3d

Lab Use Only
Lab WO#: P610007
Job Number: 14057-0001

Page 1 of 1

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	910 - Table					Lab Number	Correct Cont/Prsrv (s) Y/N
L+S #6 pit	10/6-16	9:00	S	1-4oz jar / —					✓					1	Y

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	10-6-16	11:10	[signature]	10-6-16	11:10
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
**Received on Ice Y / (N)
T1 21.7 T2____ T3____
AVG Temp °C 21.7

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____
Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA
**Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

☐ Sample(s) dropped off after hours to a secure drop off area.

Chain of Custody

Notes/Billing info: NO BTEX, No Boron

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ANALYTICAL REPORT

October 14, 2016

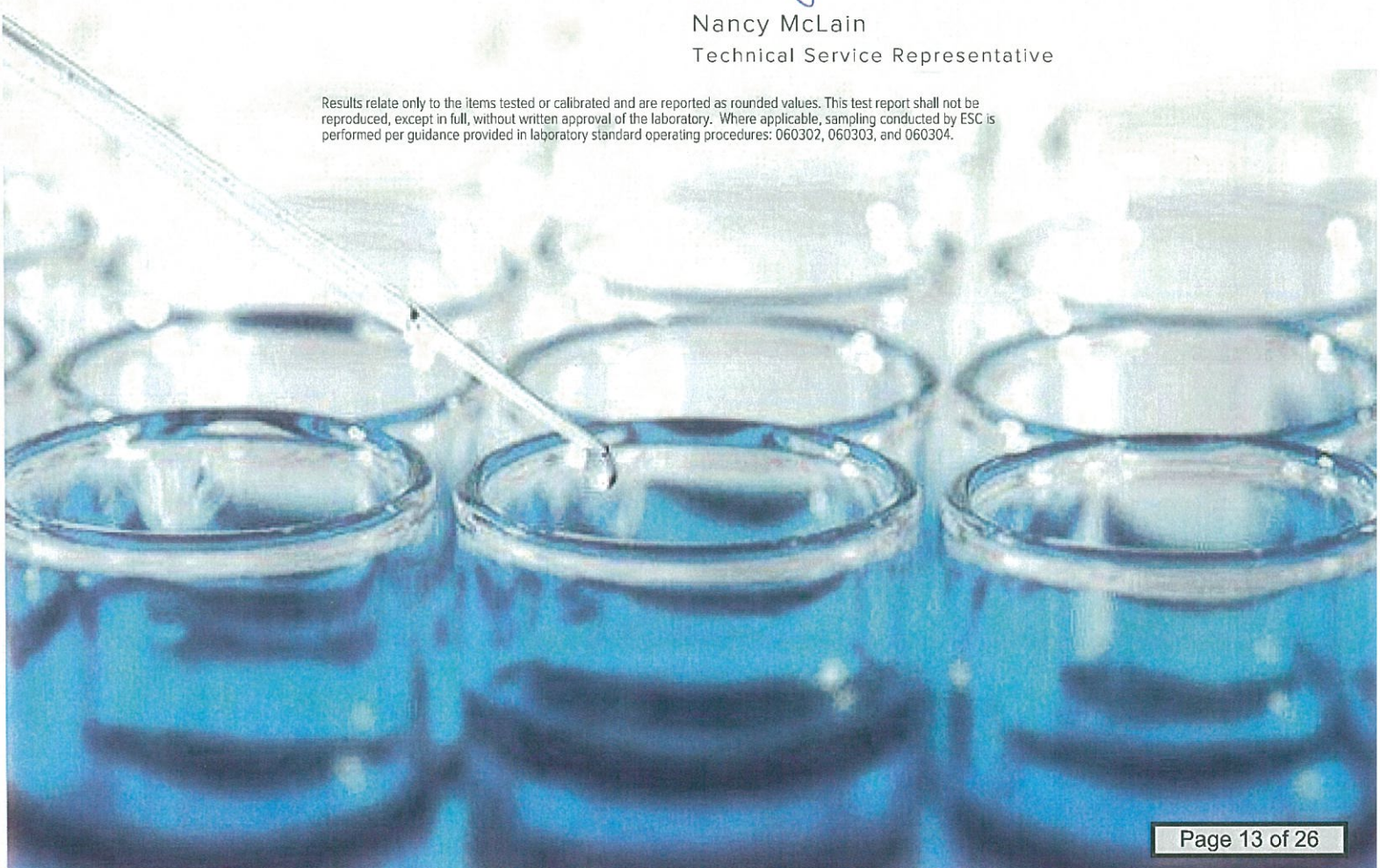
EnviroTech- NM

Sample Delivery Group:	L864870
Samples Received:	10/08/2016
Project Number:	14057-0001
Description:	L and S #6
Site:	P610007
Report To:	Tim Cain and Lynn Estes 5796 US. Highway 64 Farmington, NM 87401

Entire Report Reviewed By: Nancy F. McLain

Nancy McLain
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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L AND S #6 PIT L864870-01 Solid

Collected by	Collected date/time	Received date/time
Glenn Stevens	10/06/16 09:00	10/08/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG916159	1	10/11/16 22:22	10/12/16 14:28	KMP
Total Solids by Method 2540 G-2011	WG915947	1	10/11/16 13:50	10/11/16 14:00	KDW

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.

Nancy F. McLain

Nancy McLain
Technical Service Representative

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.7		1	10/11/2016 14:00	WG915947

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

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00634	1	10/12/2016 14:28	WG916159
Acenaphthene	ND		0.00634	1	10/12/2016 14:28	WG916159
Acenaphthylene	ND		0.00634	1	10/12/2016 14:28	WG916159
Benzo(a)anthracene	ND		0.00634	1	10/12/2016 14:28	WG916159
Benzo(a)pyrene	ND		0.00634	1	10/12/2016 14:28	WG916159
Benzo(b)fluoranthene	ND		0.00634	1	10/12/2016 14:28	WG916159
Benzo(g,h,i)perylene	ND		0.00634	1	10/12/2016 14:28	WG916159
Benzo(k)fluoranthene	ND		0.00634	1	10/12/2016 14:28	WG916159
Chrysene	ND		0.00634	1	10/12/2016 14:28	WG916159
Dibenz(a,h)anthracene	ND		0.00634	1	10/12/2016 14:28	WG916159
Fluoranthene	ND		0.00634	1	10/12/2016 14:28	WG916159
Fluorene	ND		0.00634	1	10/12/2016 14:28	WG916159
Indeno(1,2,3-cd)pyrene	ND		0.00634	1	10/12/2016 14:28	WG916159
Naphthalene	ND		0.0211	1	10/12/2016 14:28	WG916159
Phenanthrene	ND		0.00634	1	10/12/2016 14:28	WG916159
Pyrene	ND		0.00634	1	10/12/2016 14:28	WG916159
1-Methylnaphthalene	ND		0.0211	1	10/12/2016 14:28	WG916159
2-Methylnaphthalene	ND		0.0211	1	10/12/2016 14:28	WG916159
2-Chloronaphthalene	ND		0.0211	1	10/12/2016 14:28	WG916159
(S) Nitrobenzene-d5	*104*		*22.1-146*		*10/12/2016 14:28*	WG916159
(S) 2-Fluorobiphenyl	*84.7*		*40.6-122*		*10/12/2016 14:28*	WG916159
(S) p-Terphenyl-d14	*72.8*		*32.2-131*		*10/12/2016 14:28*	WG916159

Method Blank (MB)

(MB) R3169869-1 10/11/16 14:00

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000300			

L864882-03 Original Sample (OS) • Duplicate (DUP)

(OS) L864882-03 10/11/16 14:00 • (DUP) R3169869-3 10/11/16 14:00

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	60.6	59.0	1	2.70		5

Laboratory Control Sample (LCS)

(LCS) R3169869-2 10/11/16 14:00

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3169995-3 10/12/16 09:45

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) p-Terphenyl-d14	*80.6*			*32.2-131*
(S) Nitrobenzene-d5	*110*			*22.1-146*
(S) 2-Fluorobiphenyl	*90.3*			*40.6-122*

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

(LCS) R3169995-1 10/12/16 09:02 • (LCSD) R3169995-2 10/12/16 09:24

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	0.0796	0.0809	99.6	101	50.3-130			1.54	20
Acenaphthene	0.0800	0.0778	0.0794	97.2	99.2	52.4-120			2.04	20
Acenaphthylene	0.0800	0.0804	0.0818	101	102	49.6-120			1.70	20
Benzo(a)anthracene	0.0800	0.0835	0.0831	104	104	46.7-125			0.480	20
Benzo(a)pyrene	0.0800	0.0820	0.0815	102	102	42.3-119			0.620	20
Benzo(b)fluoranthene	0.0800	0.0799	0.0813	99.9	102	43.6-124			1.65	20
Benzo(g,h,i)perylene	0.0800	0.0832	0.0835	104	104	45.1-132			0.320	20
Benzo(k)fluoranthene	0.0800	0.0796	0.0795	99.5	99.4	46.1-131			0.0800	20
Chrysene	0.0800	0.0837	0.0836	105	105	49.5-131			0.0800	20
Dibenz(a,h)anthracene	0.0800	0.0837	0.0838	105	105	44.8-133			0.110	20
Fluoranthene	0.0800	0.0888	0.0899	111	112	49.3-128			1.23	20

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

(LCS) R3169995-1 10/12/16 09:02 • (LCSD) R3169995-2 10/12/16 09:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluorene	0.0800	0.0765	0.0778	95.6	97.2	50.6-121			1.69	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0831	0.0831	104	104	46.1-135			0.0800	20
Naphthalene	0.0800	0.0748	0.0762	93.4	95.3	49.6-115			1.94	20
Phenanthrene	0.0800	0.0781	0.0797	97.7	99.6	48.8-121			1.94	20
Pyrene	0.0800	0.0807	0.0808	101	101	44.7-130			0.110	20
1-Methylnaphthalene	0.0800	0.0737	0.0748	92.1	93.4	50.6-122			1.47	20
2-Methylnaphthalene	0.0800	0.0740	0.0752	92.5	93.9	50.4-120			1.57	20
2-Chloronaphthalene	0.0800	0.0766	0.0780	95.8	97.5	53.9-121			1.74	20
(S) p-Terphenyl-d14				*84.0*	*83.7*	*32.2-131*				
(S) Nitrobenzene-d5				*120*	*121*	*22.1-146*				
(S) 2-Fluorobiphenyl				*96.3*	*97.6*	*40.6-122*				

L864859-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L864859-04 10/12/16 15:33 • (MS) R3169995-4 10/12/16 15:55 • (MSD) R3169995-5 10/12/16 16:17

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.104	0.00833	0.100	0.0966	88.5	85.0	1	26.5-141			3.69	21.2
Acenaphthene	0.104	0.00848	0.101	0.101	89.2	89.4	1	31.9-130			0.210	20
Acenaphthylene	0.104	0.0103	0.107	0.106	92.7	91.7	1	33.7-129			0.990	20
Benzo(a)anthracene	0.104	0.0220	0.112	0.105	86.8	80.3	1	18.3-136			6.15	24.6
Benzo(a)pyrene	0.104	0.0423	0.119	0.109	74.1	64.1	1	16.9-135			9.08	25.2
Benzo(b)fluoranthene	0.104	0.0628	0.110	0.0993	45.3	35.1	1	10.0-134			10.2	30.9
Benzo(g,h,i)perylene	0.104	0.0387	0.113	0.0983	71.6	57.4	1	14.1-140			13.9	25.5
Benzo(k)fluoranthene	0.104	0.0195	0.107	0.0975	83.9	75.2	1	18.2-138			8.88	25.6
Chrysene	0.104	0.0266	0.113	0.107	83.0	77.7	1	17.1-145			5.05	24.2
Dibenz(a,h)anthracene	0.104	0.00976	0.101	0.0974	87.7	84.4	1	18.5-138			3.47	24.3
Fluoranthene	0.104	0.0348	0.122	0.109	84.1	71.0	1	15.4-144			11.8	27.1
Fluorene	0.104	0.00730	0.100	0.0996	89.5	88.9	1	23.5-136			0.610	20
Indeno(1,2,3-cd)pyrene	0.104	0.0297	0.106	0.0970	73.3	64.8	1	14.5-142			8.70	25.8
Naphthalene	0.104	0.0241	0.125	0.0924	96.7	65.7	1	29.2-128		J3	29.7	20
Phenanthrene	0.104	0.0275	0.107	0.0984	76.4	68.3	1	20.1-134			8.22	23.6
Pyrene	0.104	0.0339	0.121	0.105	83.6	68.7	1	11.0-148			13.7	26.1
1-Methylnaphthalene	0.104	0.0154	0.0974	0.0893	79.0	71.2	1	28.4-137			8.63	20
2-Methylnaphthalene	0.104	0.0138	0.0932	0.0848	76.4	68.3	1	26.6-137			9.42	20
2-Chloronaphthalene	0.104	U	0.0947	0.0850	91.2	81.8	1	38.6-126			10.8	20
(S) p-Terphenyl-d14					*85.0*	*82.7*		*32.2-131*				
(S) Nitrobenzene-d5					*130*	*109*		*22.1-146*				
(S) 2-Fluorobiphenyl					*99.9*	*88.4*		*40.6-122*				

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.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
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
J3	The associated batch QC was outside the established quality control range for precision.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

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
Conneticut	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.**

EnviroTech- NM

5796 US. Highway 64
Farmington, NM 87401

Billing Information:
Doris Moore
5796 US. Highway 64
Farmington, NM 87401

Report to: Lynn & Tim

Email To: Lynn & Tim

Project Description: L&S #6

City/State Collected:

Phone: 505-632-0615
Fax:

Client Project # 14057-0001

Lab Project #

Collected by (print): Glenn Stevens

Site/Facility ID # P610007

P.O. # 143701

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed 10-14-16

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative: 8270 / 2 Jar / 1000

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Rem./Contaminant	Sample # (lab only)
L&S #6 pit		SS		10-06-16	9:00	1		-01

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ___

Remarks: Please fill out & return SCSRC to iyazzie@envirotech-inc.com

pH ___ Temp ___
Flow ___ Other ___

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
[signature]	10/07/16	10:00	[redacted]
Relinquished by : (Signature) [redacted]	Date:	Time:	Received by: (Signature) [redacted]
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ___

Temp: 3.5 °C Bottles Received: 2 oz

Date: 10-8-16 Time: 9:14

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L#: L864870

D043

Acctnum: ENVIROFNM
Template:
Prelogin:
TSR: 288 - Daphne Richards
PB:
Shipped Via:

Hold #:
Condition: (lab use only)
COC Seal Intact: ___Y ___N ___NA
pH Checked: NCF:

L864870

Subcontract Sample Receipt Checklist (ScSRC)

Instructions: The subcontract sample receipt checklist (ScSRC) is a document to be filled out by the subcontract receiving laboratory and returned to Envirotech to document and identify any potential abnormalities/nonconformities with the submitted samples. It is requested the subcontract laboratory scan this document, the subcontract laboratory COC, and email/fax these two documents upon sample login. It is also requested the subcontract laboratory call Envirotech immediately with any abnormalities/nonconformances that may impact the general quality of the requested sample analysis.

iyazzie@envirotech-inc.com

Envirotech Laboratory

Envirotech WO ID: PU10007

Envirotech SCO Initials: My

Subcontract Lab Name: ESL

Date shipped: 10-07-16

Shipping Carrier: FedEX

State of sample origination: NM / CO / UT / AZ / Other

Envirotech email: jthomason@envirotech-inc.com

					Lab Comments/Resolution
1) Certification	a) Does the receiving laboratory hold the appropriate RCRA/CWA/SDWA state certification?	Y	N	NA	
	Note: There are no RCRA/CWA state certification programs for the states of NM / CO				
	b) Does the laboratory hold the certification for the requested method(s) of analysis?	Y	N	NA	
2) COC	a) Does the sample ID match the COC?	Y	N		
	b) Does the number of samples per sampling site location match the COC?	Y	N		
	c) Was the COC complete, i.e., signatures, dates/times, requested analyses?	Y	N		
	d) Were samples received within the method specified holding time	Y	N		
	or is there sufficient holding time left to conduct analysis as standard TAT?	Y	N		
3) Sample TAT	a) Did the COC indicate standard TAT, or expidited TAT?	Y	N		
	Standard 6-day TAT ☐; 24-hr rush ☐; 48-hr rush ☐; 72-hr rush ☐; other rush ☐ _____				
4) Sample Cooler	a) Was the sample cooler received in good condition?	Y	N		
	b) Was the sample(s) received in tact, i.e., not broken?	Y	N		
	c) Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C	Y	N		
	d) If no visible ice, record the temperature. Actual sample temperature.	Temperature:			
5) Sample Container	a) Is the appropriate volume/weight or number of sample containers collected:	Y	N		
6) Preservation	a) Does the COC or field labels indicate the samples were correctly preserved?	Y	N	NA	
7) Multiphase Matrix	a) Does the sample have more than one phase, i.e., multiphase?	Y	N		
	b) If so, does the COC specify which phase(s) is to be analyzed?	Y	N		

Subcontract laboratory notes:

Subcontract Laboratory

Subcontract Lab WO ID: _____ Phone No: _____ Email address: _____

Signature of subcontract laboratory sample custodian

Date Received:

QAM Vol II, Appendix C

envirotech Analytical Laboratory
5796 US Highway 64, Farmington NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81303 Ph (970) 259-0615 Fx (970) 362-1879

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

Cooler Receipt Form

Client:	ENVIROFNM	SDG#	L864870
Cooler Received/Opened On: 10/8/16	Temperature Upon Receipt:		3.3 °c
Received By: Timiesha Scott			
Signature:			

Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?			✓
Were custody papers properly filled out?	✓		
Did all bottles arrive in good condition?	✓		
Were correct bottles used for the analyses requested?	✓		
Was sufficient amount of sample sent in each bottle?	✓		
Were all applicable sample containers correctly preserved and checked for preservation? (Any not in accepted range noted on COC)			✓
If applicable, was an observable VOA headspace present?			✓
Non Conformance Generated. (If yes see attached NCF)			

Andy Vann

From: Daphne Richards
Sent: Monday, October 10, 2016 11:47 AM
To: Login; Chris Johnson; Blake Judge
Subject: Change analysis L864870 ENVIROFNM

Please change 8270 to PAHSIM per client request on L864870-01

thanks

Daphne Richards
Technical Service Representative
E-mail: drichards@esclabsciences.com
Phone: 800-767-5859 Ext. 9662
Direct: 615-773-9662
www.esclabsciences.com