

Analytical Report

Report Summary

Client: Chevron

Chain Of Custody Number:

Samples Received: 5/6/2015 8:30:00AM

Job Number: 92270-0596

Work Order: P505011

Project Name/Location: Crader Pipeline Leak

Entire Report Reviewed By:



Tim Cain, Laboratory Manager

Date: 5/12/15

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

Chevron
 322 Road 3100
 Aztec NM, 87410

Project Name: Crader Pipeline Leak
 Project Number: 92270-0596
 Project Manager: Don Lindsey

Reported:
 12-May-15 09:14

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BG (Background Soil)	P505011-01A	Soil	05/05/15	05/06/15	Glass Jar, 4 oz.
	P505011-01B	Soil	05/05/15	05/06/15	Glass Jar, 4 oz.
Soil (Impacted Soil)	P505011-02A	Soil	05/05/15	05/06/15	Glass Jar, 4 oz.
	P505011-02B	Soil	05/05/15	05/06/15	Glass Jar, 4 oz.

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Chevron
322 Road 3100
Aztec NM, 87410

Project Name: Crader Pipeline Leak
Project Number: 92270-0596
Project Manager: Don Lindsey

Reported:
12-May-15 09:14

BG (Background Soil)
P505011-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
p,m-Xylene	ND	0.19	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
Total Xylenes	ND	0.10	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
Total BTEX	ND	0.10	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		107 %		50-150	1519030	05/07/15	05/11/15	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	9.62	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	34.8	mg/kg	1	1519029	05/07/15	05/11/15	EPA 8015D	
<i>Surrogate: o-Terphenyl</i>		94.9 %		50-200	1519029	05/07/15	05/11/15	EPA 8015D	
<i>Surrogate: 4-Bromochlorobenzene-FID</i>		95.5 %		50-150	1519030	05/07/15	05/11/15	EPA 8015D	
Total Metals by 6010									
Arsenic	1.64	0.97	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Barium	520	4.84	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Cadmium	ND	0.97	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Chromium	17.0	0.97	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Copper	ND	0.97	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Lead	3.49	0.97	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Mercury	ND	0.97	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Nickel	4.55	0.97	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Selenium	1.09	0.97	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Silver	ND	0.97	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Zinc	92.2	0.97	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	

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Reported:
 12-May-15 09:14

BG (Background Soil)
P505011-01 (Solid)

Analyte	Reporting				Batch	Prepared	Analyzed	Method	Notes
	Result	Limit	Units	Dilution					
Cation/Anion Analysis									
pH @20.2°C	7.71		pH Units	1	1520007	05/11/15	05/11/15	EPA 9045D	
Electrical Conductivity	26.4		umhos/cm	1	1520007	05/11/15	05/11/15	EPA 120.1	
Sodium Absorption Ratio	0.393		N/A	1	1520008	05/11/15	05/11/15	[CALC]	
Calcium	9.04	0.01	mg/L	1	1519035	05/08/15	05/09/15	EPA 6010C	
Magnesium	5.72	0.01	mg/L	1	1519035	05/08/15	05/09/15	EPA 6010C	
Sodium	6.13	0.01	mg/L	1	1519035	05/08/15	05/09/15	EPA 6010C	
Boron-Hot Water Soluble by EPA 6010									
Boron	ND	0.49	mg/L	1	1519033	05/08/15	05/09/15	EPA 6010C	

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 Project Name: Crader Pipeline Leak
 Project Number: 92270-0596
 Project Manager: Don Lindsey

Reported:
 12-May-15 09:14

Soil (Impacted Soil)
P505011-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.10	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
Toluene	ND	0.10	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
Ethylbenzene	ND	0.10	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
p,m-Xylene	0.26	0.20	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
o-Xylene	ND	0.10	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
Total Xylenes	0.26	0.10	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
Total BTEX	0.26	0.10	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8021B	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		<i>115 %</i>		<i>50-150</i>	<i>1519030</i>	<i>05/07/15</i>	<i>05/11/15</i>	<i>EPA 8021B</i>	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	30.0	10.1	mg/kg	1	1519030	05/07/15	05/11/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	38.7	mg/kg	2	1519029	05/07/15	05/11/15	EPA 8015D	
<i>Surrogate: o-Terphenyl</i>		<i>91.2 %</i>		<i>50-200</i>	<i>1519029</i>	<i>05/07/15</i>	<i>05/11/15</i>	<i>EPA 8015D</i>	
<i>Surrogate: 4-Bromochlorobenzene-FID</i>		<i>103 %</i>		<i>50-150</i>	<i>1519030</i>	<i>05/07/15</i>	<i>05/11/15</i>	<i>EPA 8015D</i>	
Total Metals by 6010									
Arsenic	2.04	1.01	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Barium	858	5.07	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Cadmium	ND	1.01	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Chromium	9.38	1.01	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Copper	ND	1.01	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Lead	2.70	1.01	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Mercury	ND	1.01	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Nickel	5.95	1.01	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Selenium	ND	1.01	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Silver	ND	1.01	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	
Zinc	54.1	1.01	mg/kg	1	1519034	05/08/15	05/09/15	EPA 6010C	

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 Project Manager: Don Lindsey

Reported:
 12-May-15 09:14

Soil (Impacted Soil)
P505011-02 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Cation/Anion Analysis										
pH @19.2°C	8.89		pH Units	1		1520007	05/11/15	05/11/15	EPA 9045D	
Electrical Conductivity	362		umhos/cm	1		1520007	05/11/15	05/11/15	EPA 120.1	
Sodium Absorption Ratio	2.10		N/A	1		1520008	05/11/15	05/11/15	[CALC]	
Calcium	5.81	0.01	mg/L	1		1519035	05/08/15	05/09/15	EPA 6010C	
Magnesium	5.16	0.01	mg/L	1		1519035	05/08/15	05/09/15	EPA 6010C	
Sodium	28.9	0.01	mg/L	1		1519035	05/08/15	05/09/15	EPA 6010C	
Boron-Hot Water Soluble by EPA 6010										
Boron	ND	0.49	mg/L	1		1519033	05/08/15	05/09/15	EPA 6010C	

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Project Name: Crader Pipeline Leak
Project Number: 92270-0596
Project Manager: Don Lindsey

Reported:
12-May-15 09:14

Volatile Organics by EPA 8021 - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1519030 - Purge and Trap EPA 5030A

Blank (1519030-BLK1)

Prepared: 07-May-15 Analyzed: 08-May-15

Benzene	ND	0.10	mg/kg
Toluene	ND	0.10	"
Ethylbenzene	ND	0.10	"
p,m-Xylene	ND	0.20	"
o-Xylene	ND	0.10	"
Total Xylenes	ND	0.10	"
Total BTEX	ND	0.10	"

Surrogate: 4-Bromochlorobenzene-PID 0.386 " 0.400 96.6 50-150

LCS (1519030-BS1)

Prepared: 07-May-15 Analyzed: 08-May-15

Benzene	20.3	0.10	mg/kg	20.0	102	75-125
Toluene	19.9	0.10	"	20.0	99.7	70-125
Ethylbenzene	19.6	0.10	"	20.0	98.2	75-125
p,m-Xylene	39.6	0.20	"	39.9	99.1	80-125
o-Xylene	19.0	0.10	"	20.0	95.0	75-125

Surrogate: 4-Bromochlorobenzene-PID 0.360 " 0.399 90.2 50-150

Matrix Spike (1519030-MS1)

Source: P505015-01

Prepared: 07-May-15 Analyzed: 08-May-15

Benzene	20.9	0.10	mg/kg	20.0	ND	105	75-125
Toluene	21.0	0.10	"	20.0	0.12	104	70-125
Ethylbenzene	21.6	0.10	"	20.0	0.45	106	75-125
p,m-Xylene	44.9	0.20	"	39.9	2.26	107	80-125
o-Xylene	21.7	0.10	"	20.0	0.45	106	75-125

Surrogate: 4-Bromochlorobenzene-PID 0.396 " 0.399 99.1 50-150

Matrix Spike Dup (1519030-MSD1)

Source: P505015-01

Prepared: 07-May-15 Analyzed: 08-May-15

Benzene	20.9	0.10	mg/kg	20.0	ND	104	75-125	0.315	15
Toluene	21.0	0.10	"	20.0	0.12	104	70-125	0.220	15
Ethylbenzene	21.3	0.10	"	20.0	0.45	105	75-125	1.29	15
p,m-Xylene	44.1	0.20	"	40.0	2.26	105	80-125	1.88	15
o-Xylene	21.4	0.10	"	20.0	0.45	105	75-125	1.02	15

Surrogate: 4-Bromochlorobenzene-PID 0.380 " 0.400 95.2 50-150

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 Project Number: 92270-0596
 Project Manager: Don Lindsey

Reported:
 12-May-15 09:14

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
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Batch 1519029 - DRO Extraction EPA 3550M
Blank (1519029-BLK1)

Prepared: 07-May-15 Analyzed: 08-May-15

Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Surrogate: <i>o</i> -Terphenyl	35.7		"	39.9		89.4	50-200			

LCS (1519029-BS1)

Prepared: 07-May-15 Analyzed: 08-May-15

Diesel Range Organics (C10-C28)	599	24.9	mg/kg	499		120	38-132			
Surrogate: <i>o</i> -Terphenyl	42.3		"	39.9		106	50-200			

Matrix Spike (1519029-MS1)
Source: P505015-01

Prepared: 07-May-15 Analyzed: 08-May-15

Diesel Range Organics (C10-C28)	754	24.9	mg/kg	499	107	130	38-132			
Surrogate: <i>o</i> -Terphenyl	41.7		"	39.9		105	50-200			

Matrix Spike Dup (1519029-MSD1)
Source: P505015-01

Prepared: 07-May-15 Analyzed: 08-May-15

Diesel Range Organics (C10-C28)	703	24.9	mg/kg	499	107	119	38-132	7.03	20	
Surrogate: <i>o</i> -Terphenyl	40.4		"	39.9		101	50-200			

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 12-May-15 09:14

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
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Batch 1519030 - Purge and Trap EPA 5030A

Blank (1519030-BLK1)

Prepared: 07-May-15 Analyzed: 08-May-15

Gasoline Range Organics (C6-C10)	ND	9.99	mg/kg							
Surrogate: 4-Bromochlorobenzene-FID	0.342		"	0.400		85.6	50-150			

LCS (1519030-BS1)

Prepared: 07-May-15 Analyzed: 08-May-15

Gasoline Range Organics (C6-C10)	262	9.98	mg/kg	266		98.6	80-120			
Surrogate: 4-Bromochlorobenzene-FID	0.323		"	0.399		81.0	50-150			

Matrix Spike (1519030-MS1)

Source: P505015-01

Prepared: 07-May-15 Analyzed: 08-May-15

Gasoline Range Organics (C6-C10)	365	9.98	mg/kg	266	67.7	112	75-125			
Surrogate: 4-Bromochlorobenzene-FID	0.368		"	0.399		92.1	50-150			

Matrix Spike Dup (1519030-MSD1)

Source: P505015-01

Prepared: 07-May-15 Analyzed: 08-May-15

Gasoline Range Organics (C6-C10)	358	9.99	mg/kg	266	67.7	109	75-125	1.87	15	
Surrogate: 4-Bromochlorobenzene-FID	0.384		"	0.400		96.2	50-150			

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Project Name: Crader Pipeline Leak
Project Number: 92270-0596
Project Manager: Don Lindsey

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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
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Batch 1519034 - Metal Solid Digestion EPA 3051A

Blank (1519034-BLK1)

Prepared: 08-May-15 Analyzed: 09-May-15

Arsenic	ND	1.00	mg/kg
Barium	ND	5.00	"
Cadmium	ND	1.00	"
Chromium	ND	1.00	"
Copper	ND	1.00	"
Lead	ND	1.00	"
Mercury	ND	1.00	"
Nickel	ND	1.00	"
Selenium	ND	1.00	"
Silver	ND	1.00	"
Zinc	ND	1.00	"

Duplicate (1519034-DUP1)

Source: P505011-01

Prepared: 08-May-15 Analyzed: 09-May-15

Arsenic	1.69	1.00	mg/kg	1.64	3.34	30
Barium	510	4.98	"	520	2.09	30
Cadmium	ND	1.00	"	ND		30
Chromium	16.0	1.00	"	17.0	6.30	30
Copper	ND	1.00	"	ND		30
Lead	3.98	1.00	"	3.49	13.3	30
Mercury	ND	1.00	"	ND		30
Nickel	4.22	1.00	"	4.55	7.55	30
Selenium	ND	1.00	"	1.09		30
Silver	ND	1.00	"	ND		30
Zinc	93.9	1.00	"	92.2	1.74	30

Matrix Spike (1519034-MS1)

Source: P505011-01

Prepared: 08-May-15 Analyzed: 09-May-15

Arsenic	0.28	mg/L	0.250	0.02	106	75-125
Barium	10.7	"	5.00	4.94	115	75-125
Cadmium	0.24	"	0.250	-0.01	95.1	75-125
Chromium	0.69	"	0.500	0.16	106	75-125
Copper	0.40	"	0.500	-0.11	79.3	75-125
Lead	0.51	"	0.500	0.03	96.3	75-125
Mercury	0.10	"	0.100	-0.003	97.3	75-125
Nickel	0.54	"	0.500	0.04	98.4	75-125
Selenium	0.11	"	0.100	0.01	102	75-125
Silver	0.10	"	0.100	-0.008	96.2	75-125
Zinc	1.43	"	0.500	0.88	110	75-125

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 Project Name: Crader Pipeline Leak
 Project Number: 92270-0596
 Project Manager: Don Lindsey

Reported:
 12-May-15 09:14

Boron-Hot Water Soluble by EPA 6010 - Quality Control
Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1519033 - Boron HW Soluble Digestion
Blank (1519033-BLK1)

Prepared: 08-May-15 Analyzed: 09-May-15

Boron ND 0.50 mg/L

Duplicate (1519033-DUP1)
Source: P505011-01

Prepared: 08-May-15 Analyzed: 09-May-15

Boron ND 0.50 mg/L ND 30

Matrix Spike (1519033-MS1)
Source: P505011-01

Prepared: 08-May-15 Analyzed: 09-May-15

Boron 0.51 mg/L 0.500 0.007 101 75-125

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Project Name: Crader Pipeline Leak
Project Number: 92270-0596
Project Manager: Don Lindsey

Reported:
12-May-15 09:14

Notes and Definitions

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

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Client: CHEVRON - Don Lindley
 Project: CRAIGER PIPELINE LEAK
 Sampler: DON LINDLEY
 Phone: 505 301 5576
 Email(s): llin@chevron.com
 Project Manager:

RUSH?

☐ 1d
☒ 3d

Lab Use Only		Analysis and Method								Lab Only		
Lab WO#		GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	Colo. 910 for Soil					Lab Number	Correct Cont/Prsrv (s) Y/N
Job Number												
P505011												
92270-0596												

Page of

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPEReservative	GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0	Colo. 910 for Soil										
2 4oz JARS Soil	5/5/15	3pm	Soil	2 - no pres.					X										
(BG = Background Soil)	"	"		1 4oz jar					✓										
("Soil" = IMPACTED Soil)	"	"		1 4oz jar					✓										

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Lab Use Only	
<i>Don Lindley</i>	5/6/15	8:13 AM	<i>[Signature]</i>	5/6/15	8:30	**Received on Ice Y / (N)	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T1 14.7	T2 14.5
						AVG Temp °C 14.7	

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.

<input type="checkbox"/> Sample(s) dropped off after hours to a secure drop off area.	Chain of Custody	Notes/Billing info:
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May 08, 2015

EnviroTech- NM

Sample Delivery Group: L763528
Samples Received: 05/07/2015
Project Number: 92270-0596
Description: Crader Pipeline Leak
Site: P505011
Report To: Lynn Cook
5796 US. Highway 64
Farmington, NM 87401

Entire Report Reviewed By:



T. Alan Harvill

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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BG (BACKGROUND) L763528-01 Solid

Collected by
Don LindseyCollected date/time
05/05/15 15:00Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG787291	1	05/07/15 12:22	05/08/15 02:26	KMF
Total Solids by Method 2540 G-2011	WG787312	1	05/07/15 14:05	05/08/15 09:12	MEL

¹ Cp² Tc³ Ss

SOIL (IMPACTED SOIL) L763528-02 Solid

Collected by
Don LindseyCollected date/time
05/05/15 15:00Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG787291	1	05/07/15 12:22	05/08/15 02:49	KMF
Total Solids by Method 2540 G-2011	WG787312	1	05/07/15 14:05	05/08/15 09:12	MEL

⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All 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.

T. Alan Harvill
Technical Service Representative

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	69.5		1	05/08/2015 09:12	WG787312

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00864	1	05/08/2015 02:26	WG787291
Acenaphthene	ND		0.00864	1	05/08/2015 02:26	WG787291
Acenaphthylene	ND		0.00864	1	05/08/2015 02:26	WG787291
Benzo(a)anthracene	ND		0.00864	1	05/08/2015 02:26	WG787291
Benzo(a)pyrene	ND		0.00864	1	05/08/2015 02:26	WG787291
Benzo(b)fluoranthene	ND		0.00864	1	05/08/2015 02:26	WG787291
Benzo(g,h,i)perylene	ND		0.00864	1	05/08/2015 02:26	WG787291
Benzo(k)fluoranthene	ND		0.00864	1	05/08/2015 02:26	WG787291
Chrysene	ND		0.00864	1	05/08/2015 02:26	WG787291
Dibenz(a,h)anthracene	ND		0.00864	1	05/08/2015 02:26	WG787291
Fluoranthene	ND		0.00864	1	05/08/2015 02:26	WG787291
Fluorene	ND		0.00864	1	05/08/2015 02:26	WG787291
Indeno(1,2,3-cd)pyrene	ND		0.00864	1	05/08/2015 02:26	WG787291
Naphthalene	ND		0.0288	1	05/08/2015 02:26	WG787291
Phenanthrene	ND		0.00864	1	05/08/2015 02:26	WG787291
Pyrene	ND		0.00864	1	05/08/2015 02:26	WG787291
1-Methylnaphthalene	ND		0.0288	1	05/08/2015 02:26	WG787291
2-Methylnaphthalene	ND		0.0288	1	05/08/2015 02:26	WG787291
2-Chloronaphthalene	ND		0.0288	1	05/08/2015 02:26	WG787291
(S) Nitrobenzene-d5	87.2		22.1-146		05/08/2015 02:26	WG787291
(S) 2-Fluorobiphenyl	73.3		40.6-122		05/08/2015 02:26	WG787291
(S) p-Terphenyl-d14	58.0		32.2-131		05/08/2015 02:26	WG787291

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	77.2		1	05/08/2015 09:12	WG787312

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00777	1	05/08/2015 02:49	WG787291
Acenaphthene	ND		0.00777	1	05/08/2015 02:49	WG787291
Acenaphthylene	ND		0.00777	1	05/08/2015 02:49	WG787291
Benzo(a)anthracene	ND		0.00777	1	05/08/2015 02:49	WG787291
Benzo(a)pyrene	ND		0.00777	1	05/08/2015 02:49	WG787291
Benzo(b)fluoranthene	ND		0.00777	1	05/08/2015 02:49	WG787291
Benzo(g,h,i)perylene	ND		0.00777	1	05/08/2015 02:49	WG787291
Benzo(k)fluoranthene	ND		0.00777	1	05/08/2015 02:49	WG787291
Chrysene	ND		0.00777	1	05/08/2015 02:49	WG787291
Dibenz(a,h)anthracene	ND		0.00777	1	05/08/2015 02:49	WG787291
Fluoranthene	ND		0.00777	1	05/08/2015 02:49	WG787291
Fluorene	ND		0.00777	1	05/08/2015 02:49	WG787291
Indeno(1,2,3-cd)pyrene	ND		0.00777	1	05/08/2015 02:49	WG787291
Naphthalene	0.0336		0.0259	1	05/08/2015 02:49	WG787291
Phenanthrene	0.0199		0.00777	1	05/08/2015 02:49	WG787291
Pyrene	ND		0.00777	1	05/08/2015 02:49	WG787291
1-Methylnaphthalene	ND		0.0259	1	05/08/2015 02:49	WG787291
2-Methylnaphthalene	0.0499		0.0259	1	05/08/2015 02:49	WG787291
2-Chloronaphthalene	ND		0.0259	1	05/08/2015 02:49	WG787291
(S) Nitrobenzene-d5	63.1		22.1-146		05/08/2015 02:49	WG787291
(S) 2-Fluorobiphenyl	58.4		40.6-122		05/08/2015 02:49	WG787291
(S) p-Terphenyl-d14	48.0		32.2-131		05/08/2015 02:49	WG787291

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 05/08/15 09:10

Analyte	MB Result %	<u>MB Qualifier</u>	MB RDL %
Total Solids	0.000100		

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L763216-02 Original Sample (OS) • Duplicate (DUP)

(OS) 05/08/15 09:11 • (DUP) 05/08/15 09:11

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits %
Total Solids	87.4	85.8	1	1.87		5

Laboratory Control Sample (LCS)

(LCS) 05/08/15 09:10

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



Method Blank (MB)

(MB) 05/08/15 02:03

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Anthracene	ND		0.00600
Acenaphthene	ND		0.00600
Acenaphthylene	ND		0.00600
Benzo(a)anthracene	ND		0.00600
Benzo(a)pyrene	ND		0.00600
Benzo(b)fluoranthene	ND		0.00600
Benzo(g,h,i)perylene	ND		0.00600
Benzo(k)fluoranthene	ND		0.00600
Chrysene	ND		0.00600
Dibenz(a,h)anthracene	ND		0.00600
Fluoranthene	ND		0.00600
Fluorene	ND		0.00600
Indeno(1,2,3-cd)pyrene	ND		0.00600
Naphthalene	ND		0.0200
Phenanthrene	ND		0.00600
Pyrene	ND		0.00600
1-Methylnaphthalene	ND		0.0200
2-Methylnaphthalene	ND		0.0200
2-Chloronaphthalene	ND		0.0200
(S) p-Terphenyl-d14	76.7		32.2-131
(S) Nitrobenzene-d5	97.7		22.1-146
(S) 2-Fluorobiphenyl	85.0		40.6-122

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) 05/08/15 01:18 • (LCSD) 05/08/15 01:41

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	0.0714	0.0719	89.2	89.9	50.3-130			0.710	20
Acenaphthene	0.0800	0.0658	0.0705	82.3	88.1	52.4-120			6.78	20
Acenaphthylene	0.0800	0.0681	0.0752	85.1	94.0	49.6-120			9.93	20
Benzo(a)anthracene	0.0800	0.0722	0.0759	90.3	94.9	46.7-125			4.97	20
Benzo(a)pyrene	0.0800	0.0629	0.0636	78.6	79.4	42.3-119			1.04	20
Benzo(b)fluoranthene	0.0800	0.0652	0.0708	81.4	88.5	43.6-124			8.28	20
Benzo(g,h,i)perylene	0.0800	0.0721	0.0751	90.1	93.9	45.1-132			4.18	20
Benzo(k)fluoranthene	0.0800	0.0704	0.0720	87.9	90.1	46.1-131			2.38	20
Chrysene	0.0800	0.0678	0.0686	84.8	85.7	49.5-131			1.08	20
Dibenz(a,h)anthracene	0.0800	0.0745	0.0750	93.2	93.7	44.8-133			0.600	20

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

(LCS) 05/08/15 01:18 • (LCSD) 05/08/15 01:41

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 %
Fluoranthene	0.0800	0.0773	0.0708	96.7	88.5	49.3-128			8.85	20
Fluorene	0.0800	0.0656	0.0705	82.0	88.1	50.6-121			7.21	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0732	0.0764	91.5	95.5	46.1-135			4.33	20
Naphthalene	0.0800	0.0653	0.0692	81.7	86.6	49.6-115			5.81	20
Phenanthrene	0.0800	0.0677	0.0704	84.6	88.0	48.8-121			3.89	20
Pyrene	0.0800	0.0768	0.0818	95.9	102	44.7-130			6.42	20
1-Methylnaphthalene	0.0800	0.0631	0.0742	78.9	92.7	50.6-122			16.1	20
2-Methylnaphthalene	0.0800	0.0606	0.0708	75.7	88.5	50.4-120			15.6	20
2-Chloronaphthalene	0.0800	0.0604	0.0674	75.6	84.2	53.9-121			10.9	20
(S) p-Terphenyl-d14				74.6	77.7	32.2-131				
(S) Nitrobenzene-d5				90.8	99.0	22.1-146				
(S) 2-Fluorobiphenyl				84.5	84.0	40.6-122				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L763518-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/08/15 06:59 • (MS) 05/08/15 07:22 • (MSD) 05/08/15 07:45

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 %
Anthracene	0.0800	ND	0.0641	0.0579	80.2	72.4	1	26.5-141			10.1	21.2
Acenaphthene	0.0800	ND	0.0619	0.0565	77.3	70.6	1	31.9-130			9.13	20
Acenaphthylene	0.0800	ND	0.0662	0.0604	82.7	75.4	1	33.7-129			9.20	20
Benzo(a)anthracene	0.0800	ND	0.0634	0.0558	79.3	69.8	1	18.3-136			12.7	24.6
Benzo(a)pyrene	0.0800	ND	0.0549	0.0528	68.6	66.0	1	16.9-135			3.83	25.2
Benzo(b)fluoranthene	0.0800	ND	0.0583	0.0507	72.9	63.3	1	10.0-134			14.0	30.9
Benzo(g,h,i)perylene	0.0800	ND	0.0582	0.0535	72.8	66.9	1	14.1-140			8.39	25.5
Benzo(k)fluoranthene	0.0800	ND	0.0535	0.0495	66.9	61.9	1	18.2-138			7.64	25.6
Chrysene	0.0800	ND	0.0582	0.0532	72.8	66.5	1	17.1-145			9.00	24.2
Dibenz(a,h)anthracene	0.0800	ND	0.0583	0.0551	72.8	68.9	1	18.5-138			5.50	24.3
Fluoranthene	0.0800	0.000710	0.0591	0.0529	73.0	65.3	1	15.4-144			11.1	27.1
Fluorene	0.0800	ND	0.0607	0.0552	75.9	69.0	1	23.5-136			9.41	20
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0569	0.0524	71.2	65.5	1	14.5-142			8.27	25.8
Naphthalene	0.0800	0.0188	0.0641	0.0589	56.5	50.1	1	29.2-128			8.37	20
Phenanthrene	0.0800	0.000868	0.0601	0.0540	74.0	66.4	1	20.1-134			10.6	23.6
Pyrene	0.0800	0.00102	0.0684	0.0614	84.3	75.5	1	11.0-148			10.8	26.1
1-Methylnaphthalene	0.0800	ND	0.0637	0.0585	79.6	73.1	1	28.4-137			8.48	20
2-Methylnaphthalene	0.0800	0.000831	0.0638	0.0583	78.7	71.8	1	26.6-137			8.98	20
2-Chloronaphthalene	0.0800	ND	0.0626	0.0575	78.3	71.9	1	38.6-126			8.57	20
(S) p-Terphenyl-d14					68.1	63.2		32.2-131				



L763518-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/08/15 06:59 • (MS) 05/08/15 07:22 • (MSD) 05/08/15 07:45

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) Nitrobenzene-d5					85.7	76.3		22.1-146				
(S) 2-Fluorobiphenyl					80.7	75.5		40.6-122				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,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.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
-----------	-------------

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



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**.

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		

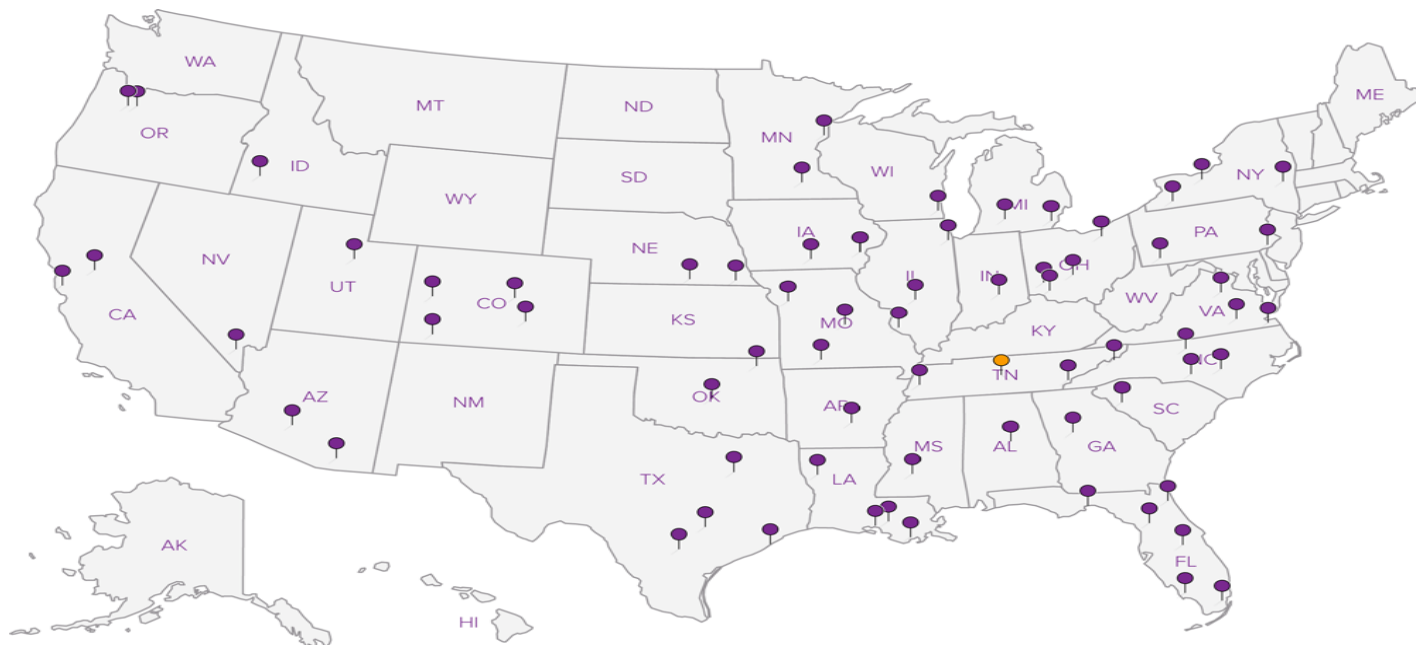
¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ^{n/a} Accreditation not applicable

Third Party & Federal Accreditations

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

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: Crader Pipeline Leak

City/State

Collected:

Phone: 505-632-0615

Fax:

Client Project #

92270-0596

Lab Project #

Collected by (print):

Don Lindsey

Site/Facility ID #

P505011

P.O. #

142018

Collected by (signature):

Rush? (Lab MUST Be Notified)

☒ Same Day200%
☒ Next Day100%
☐ Two Day50%
☐ Three Day25%

Date Results Needed

Email? ☐ No ☒ Yes

FAX? ☒ No ☐ Yes

No.
of
Cntrs

Immediately

Packed on Ice N ☐ Y ☒

Sample ID

Comp/Grab

Matrix *

Depth

Date

Time

BG (Background Soil)

S

05/05/15

15:00

1

Soil (Impacted Soil)

S

05/05/15

15:00

1

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



L# 1763528

D031

Acctnum: ENVIROFNM

Template:

Prelogin:

TSR: 288 - Daphne Richards

PB:

Shipped Via:

Rem./Contaminant

Sample # (lab only)

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

1630937378143

Hold #

Relinquished by: (Signature)

[Signature]

Date:

05-06-15

Time:

14:07

Received by: (Signature)

[Signature]

Samples returned via: ☐ UPS

☐ FedEx ☐ Courier ☐ _____

Temp: _____ °C Bottles Received:

4.2 2540e

Condition: (lab use only)

OK

COC Seal Intact: Y _____ N _____ NA

pH Checked: _____ NCF: _____

Relinquished by: (Signature)

[Signature]

Date:

Time:

Received for lab by: (Signature)

[Signature]

Date: _____ Time: _____

5/7/15 0900