



February 14, 2014

LT Environmental, Inc.

John Cocroft

4600 West 60th Avenue

Arvada CO 80003

Project Name - KMG - Sparboe 7N-5HZ Pad

Project Number - 014211290

Attached are your analytical results for KMG - Sparboe 7N-5HZ Pad received by Origins Laboratory, Inc. January 08, 2014. This project is associated with Origins project number X401068-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

John Cocroft
Project Number: 014211290
Project: KMG - Sparboe 7N-5HZ Pad

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Sparboe On Pad	X401068-01	Soil	January 8, 2014 10:20	01/08/2014 17:00
Sparboe Off (0A)	X401068-02	Soil	January 8, 2014 10:26	01/08/2014 17:00
Sparboe Off (0B)	X401068-03	Soil	January 8, 2014 10:29	01/08/2014 17:00
Sparboe Off (0C)	X401068-04	Soil	January 8, 2014 10:32	01/08/2014 17:00
Sparboe Off (0D)	X401068-05	Soil	January 8, 2014 10:35	01/08/2014 17:00
Sparboe Off Comp	X401068-06	Soil	January 8, 2014 10:40	01/08/2014 17:00

Origins Laboratory, Inc.



Noelle Doyle Mathis, President

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

John Cocroft
Project Number: 014211290
Project: KMG - Sparboe 7N-5HZ Pad

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page 1 of 1

X401068

ORIGINS

LABORATORY, INC

Client: LT ENV
Address: 4600 W 60th AVE
Telephone Number: 303 433 9788
Email Address: JCOCROFT@LTENV.COM

Project Manager: JOHN COCROFT
Project Name: SPARBOE 27-34 HZ
Project Number: 014211290
Samples Collected By: B. PARASAKO

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #			Other
SPARBOE ON PAD	1/13/14	1020	3	X					X			TPH RTEX PH, EC, SAR Total Arsenic Total Boron Total Arsenic	1
SPARBOE OFF (OA)		1026	1										2
SPARBOE OFF (OA)		1039	1										3
SPARBOE OFF (OC)		1032	1										4
SPARBOE OFF (OS)		1035	1										5
SPARBOE OFF CAMP		1040	2										6
													7
													8
													9
													10

Relinquished By: <i>[Signature]</i>	Date: 1/18/14	Time: 1700	Relinquished By: <i>[Signature]</i>	Date: 1/18/14	Time: 1700
Relinquished By:	Date:	Time:	Relinquished By:	Date:	Time:

Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☒ Standard

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Origins Laboratory, Inc.

[Signature]

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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

John Cocroft
Project Number: 014211290
Project: KMG - Sparboe 7N-5HZ Pad

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X401068

Client: LTE

Client Project ID: Sparboe 27-34Hz

Checklist Completed by: Jeff Smith

Shipped Via: Pick Up
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 1/8/14 17:22

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: _____ (Describe)

Cooler Number/Temperature: 12.4 °C 1 °C 1 °C 1 °C

Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PH
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Soil
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ ·NaOH, ZnAc·NaOH).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Soil
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date, time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

01-15-14 1524
Date/Time Reviewed

Origins Laboratory, Inc.

Noelle Doyle Mathis, President

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LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

John Cocroft

Project Number: 014211290

Project: KMG - Sparboe 7N-5HZ Pad

Sparboe On Pad

1/8/2014 10:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X401068-01 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.004	mg/kg	1	4A09009	01/09/2014	01/13/2014
Toluene	ND	0.004	"	"	"	"	"
Ethylbenzene	ND	0.004	"	"	"	"	"
Xylenes, total	ND	0.004	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4

110 % 70-130

" " "

Surrogate: Toluene-d8

108 % 70-130

" " "

Surrogate: 4-Bromofluorobenzene

109 % 70-130

" " "

Conductance/Specific Conductance by EPA 120.1

Specific Conductance (EC)	0.210		mmhos/cm	1	4A09008	01/09/2014	01/10/2014
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Metals by SW846 3050B/6010C

Arsenic	2.96	2.82	mg/kg dry	1	1359200	01/13/2014	01/14/2014
Barium	54.3	0.471	"	"	"	"	"

pH by SW846 9045C/9045D

pH	8.13	0.100	SU	1	1359375		01/11/2014	H
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SAR Metals by SW846 3050B/6010C

Calcium	3390	23.5	mg/kg dry	1	1359200	01/13/2014	01/14/2014
Magnesium	1590	28.2	"	"	"	"	"

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John Cocroft
Project Number: 014211290
Project: KMG - Sparboe 7N-5HZ Pad

Sparboe On Pad**1/8/2014 10:20:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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GEL Laboratories, LLC
X401068-01 (Soil)**SAR Metals by SW846 3050B/6010C**

Sodium	84.7	23.5	mg/kg dry	1	1359200	01/13/2014	01/14/2014
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Sodium Adsorption Ratio

Sodium Adsorption Ratio	0.301		none	1	1360022		01/14/2014
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TCLP Metals by 1311/3010A/6010C

Arsenic	ND	0.300	mg/L	1	1359943	01/14/2014	01/14/2014	U
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TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	25.0	mg/kg	1	4A09010	01/09/2014	01/09/2014
Diesel (C10-C28)	ND	25.0	"	"	"	"	"
Residual Range Organics (C28-C36)	ND	50.0	"	"	"	"	"
TPH - Carbon Chain Total	ND	25.0	"	"	"	"	"

Surrogate: o-Terphenyl	94.4 %	59-131			"	"	"
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Origins Laboratory, Inc.



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John Cocroft

Project Number: 014211290

Project: KMG - Sparboe 7N-5HZ Pad

Sparboe Off (0A)

1/8/2014 10:26:00AM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

GEL Laboratories, LLC

X401068-02 (Soil)

Metals by SW846 3050B/6010C

Arsenic	2.68	2.71	mg/kg dry	1	1359200	01/13/2014	01/14/2014	J
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Origins Laboratory, Inc.



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LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

John Cocroft

Project Number: 014211290

Project: KMG - Sparboe 7N-5HZ Pad

Sparboe Off (OB)

1/8/2014 10:29:00AM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

GEL Laboratories, LLC

X401068-03 (Soil)

Metals by SW846 3050B/6010C

Arsenic	2.02	3.02	mg/kg dry	1	1359200	01/13/2014	01/14/2014	J
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Origins Laboratory, Inc.



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Noelle Doyle Mathis, President

LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

John Cocroft

Project Number: 014211290

Project: KMG - Sparboe 7N-5HZ Pad

Sparboe Off (OC)

1/8/2014 10:32:00AM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

GEL Laboratories, LLC

X401068-04 (Soil)

Metals by SW846 3050B/6010C

Arsenic	2.18	2.90	mg/kg dry	1	1359200	01/13/2014	01/14/2014	J
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Origins Laboratory, Inc.



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4600 West 60th Avenue

Arvada CO 80003

John Cocroft

Project Number: 014211290

Project: KMG - Sparboe 7N-5HZ Pad

Sparboe Off (OD)

1/8/2014 10:35:00AM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

GEL Laboratories, LLC

X401068-05 (Soil)

Metals by SW846 3050B/6010C

Arsenic	2.05	3.05	mg/kg dry	1	1359200	01/13/2014	01/14/2014	J
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4600 West 60th Avenue

Arvada CO 80003

John Cocroft

Project Number: 014211290

Project: KMG - Sparboe 7N-5HZ Pad

Sparboe Off Comp

1/8/2014 10:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X401068-06 (Soil)

Conductance/Specific Conductance by EPA 120.1

Specific Conductance (EC)	0.0830		mmhos/cm	1	4A09008	01/09/2014	01/10/2014
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Metals by SW846 3050B/6010C

Arsenic	3.17	3.00	mg/kg dry	1	1359200	01/13/2014	01/14/2014
Barium	54.7	0.501	"	"	"	"	"

pH by SW846 9045C/9045D

pH	8.40	0.100	SU	1	1359375		01/11/2014	H
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SAR Metals by SW846 3050B/6010C

Calcium	2030	25.0	mg/kg dry	1	1359200	01/13/2014	01/14/2014
Magnesium	896	30.0	"	"	"	"	"
Sodium	31.0	25.0	"	"	"	"	"

Sodium Adsorption Ratio

Sodium Adsorption Ratio	0.144		none	1	1360022		01/14/2014
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John Cocroft

Project Number: 014211290

Project: KMG - Sparboe 7N-5HZ Pad

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A09009 - EPA 5030 (soil)

Blank (4A09009-BLK1)

Prepared: 01/09/2014 Analyzed: 01/13/2014

Benzene	ND	0.004	mg/kg							
Toluene	ND	0.004	"							
Ethylbenzene	ND	0.004	"							
Xylenes, total	ND	0.004	"							
Surrogate: 1,2-Dichloroethane-d4	71		ug/kg	62.5	113		70-130			
Surrogate: Toluene-d8	67		"	62.5	108		70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5	108		70-130			

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John Cocroft

Project Number: 014211290

Project: KMG - Sparboe 7N-5HZ Pad

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A09009 - EPA 5030 (soil)

LCS (4A09009-BS1)

Prepared: 01/09/2014 Analyzed: 01/13/2014

Benzene	0.2	0.004	mg/kg	0.200		100	70-130			
Toluene	0.2	0.004	"	0.200		112	70-130			
Ethylbenzene	0.2	0.004	"	0.200		105	70-130			
m,p-Xylene	0.4	0.008	"	0.400		98.3	70-130			
o-Xylene	0.2	0.004	"	0.200		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	61		ug/kg	62.5		97.2	70-130			
Surrogate: Toluene-d8	69		"	62.5		111	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		109	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A09009 - EPA 5030 (soil)

Matrix Spike (4A09009-MS1)		Source: X401067-01			Prepared: 01/09/2014 Analyzed: 01/13/2014					
Benzene	0.2	0.004	mg/kg	0.200	ND	109	70-130			
Toluene	0.2	0.004	"	0.200	ND	111	70-130			
Ethylbenzene	0.2	0.004	"	0.200	ND	105	70-130			
m,p-Xylene	0.4	0.008	"	0.400	ND	96.1	70-130			
o-Xylene	0.2	0.004	"	0.200	ND	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	72		ug/kg	62.5		115	70-130			
Surrogate: Toluene-d8	67		"	62.5		107	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		109	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A09009 - EPA 5030 (soil)

Matrix Spike Dup (4A09009-MSD1)		Source: X401067-01			Prepared: 01/09/2014 Analyzed: 01/13/2014					
Benzene	0.2	0.004	mg/kg	0.200	ND	100	70-130	8.30	20	
Toluene	0.2	0.004	"	0.200	ND	103	70-130	7.50	20	
Ethylbenzene	0.2	0.004	"	0.200	ND	99.2	70-130	5.26	20	
m,p-Xylene	0.4	0.008	"	0.400	ND	92.3	70-130	4.01	20	
o-Xylene	0.2	0.004	"	0.200	ND	98.8	70-130	6.08	20	
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		108	70-130			
Surrogate: Toluene-d8	68		"	62.5		109	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 8015M - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4A09010 - EPA 3580

Blank (4A09010-BLK1)

Prepared: 01/09/2014 Analyzed: 01/09/2014

Gasoline (C6-C10)	ND	50.0	mg/kg
Diesel (C10-C28)	ND	50.0	"
Residual Range Organics (C28-C36)	ND	100	"
TPH - Carbon Chain Total	ND	50.0	"

Surrogate: o-Terphenyl 56.8 g 50.0 114 59-131

Blank (4A09010-BLK2)

Prepared: 01/09/2014 Analyzed: 01/09/2014

Gasoline (C6-C10)	ND	50.0	mg/kg
Diesel (C10-C28)	ND	50.0	"
Residual Range Organics (C28-C36)	ND	100	"
TPH - Carbon Chain Total	ND	50.0	"

Surrogate: o-Terphenyl 46.2 g 50.0 92.4 59-131

LCS (4A09010-BS1)

Prepared: 01/09/2014 Analyzed: 01/09/2014

Gasoline (C6-C10)	956	50.0	mg/kg	1000	95.6	59-133
Diesel (C10-C28)	1010	50.0	"	1000	101	64-121
Residual Range Organics (C28-C36)	923	100	"	1000	92.3	58-124

Surrogate: o-Terphenyl 60.9 g 50.0 122 59-131

LCS (4A09010-BS2)

Prepared: 01/09/2014 Analyzed: 01/09/2014

Gasoline (C6-C10)	1120	50.0	mg/kg	1000	112	59-133
Diesel (C10-C28)	1160	50.0	"	1000	116	64-121

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4600 West 60th Avenue
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John Cocroft
Project Number: 014211290
Project: KMG - Sparboe 7N-5HZ Pad

Extractable Petroleum Hydrocarbons by 8015M - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A09010 - EPA 3580										
LCS (4A09010-BS2)					Prepared: 01/09/2014 Analyzed: 01/09/2014					
Residual Range Organics (C28-C36)	1090	100	mg/kg	1000		109	58-124			
Surrogate: o-Terphenyl	59.3		g	50.0		119	59-131			
Matrix Spike (4A09010-MS1)					Source: X401067-01 Prepared: 01/09/2014 Analyzed: 01/09/2014					
Gasoline (C6-C10)	953	50.0	mg/kg	1000	ND	95.3	57-139			
Diesel (C10-C28)	1000	50.0	"	1000	ND	100	53-125			
Residual Range Organics (C28-C36)	936	100	"	1000	22.7	91.3	47-133			
Surrogate: o-Terphenyl	55.8		g	50.0		112	59-131			
Matrix Spike (4A09010-MS2)					Source: X401083-02 Prepared: 01/09/2014 Analyzed: 01/09/2014					
Gasoline (C6-C10)	1050	50.0	mg/kg	1000	ND	105	57-139			
Diesel (C10-C28)	1090	50.0	"	1000	ND	109	53-125			
Residual Range Organics (C28-C36)	1060	100	"	1000	55.8	100	47-133			
Surrogate: o-Terphenyl	59.3		g	50.0		119	59-131			
Matrix Spike Dup (4A09010-MSD1)					Source: X401067-01 Prepared: 01/09/2014 Analyzed: 01/09/2014					
Gasoline (C6-C10)	756	50.0	mg/kg	1000	ND	75.6	57-139	23.0	20	QR-02
Diesel (C10-C28)	823	50.0	"	1000	ND	82.3	53-125	19.6	20	
Residual Range Organics (C28-C36)	805	100	"	1000	22.7	78.2	47-133	15.1	20	
Surrogate: o-Terphenyl	41.8		g	50.0		83.5	59-131			
Matrix Spike Dup (4A09010-MSD2)					Source: X401083-02 Prepared: 01/09/2014 Analyzed: 01/09/2014					
Gasoline (C6-C10)	830	50.0	mg/kg	1000	ND	83.0	57-139	23.4	20	QR-02
Diesel (C10-C28)	892	50.0	"	1000	ND	89.2	53-125	19.7	20	
Residual Range Organics (C28-C36)	852	100	"	1000	55.8	79.6	47-133	21.7	20	QR-02
Surrogate: o-Terphenyl	44.4		g	50.0		88.7	59-131			

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Noelle Doyle Mathis, President

LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

John Cocroft
Project Number: 014211290
Project: KMG - Sparboe 7N-5HZ Pad

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A09008 - NO PREP										
Blank (4A09008-BLK1)					Prepared: 01/09/2014 Analyzed: 01/10/2014					
Specific Conductance (EC)	0.00180		mmhos/cm							
Duplicate (4A09008-DUP1)					Source: X401058-02 Prepared: 01/09/2014 Analyzed: 01/10/2014					
Specific Conductance (EC)	0.0800		mmhos/cm		0.0780			2.53	10	

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John Cocroft
Project Number: 014211290
Project: KMG - Sparboe 7N-5HZ Pad

Metals by SW846 3050B/6010C - Quality Control

GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1359200 - SW846 3050B										
BLANK (1203017174-BLK)					Prepared: 01/13/2014 Analyzed: 01/14/2014					
Arsenic	ND	2.91	mg/kg		0		-			U
Barium	0.124	0.485	"		0		-			J
LCS (1203017175-BKS)					Prepared: 01/13/2014 Analyzed: 01/14/2014					
Arsenic	45.7	2.77	mg/kg	46.2	0	98.9	80-120			
Barium	45.4	0.462	"	46.2	0	98.3	80-120			
DUP (1203017176 D)					Source: 341062001		Prepared: 01/13/2014 Analyzed: 01/14/2014			
Arsenic	1.28	2.98	mg/kg dry		2.02		0-20	44.6	20	J
Barium	27.0	0.497	"		28.5		0-20	5.49	20	
MS (1203017177 S)					Source: 341062001		Prepared: 01/13/2014 Analyzed: 01/14/2014			
Barium	79.5	0.507	mg/kg dry	50.7	28.5	101	75-125			
Arsenic	51.1	3.04	"	50.7	2.02	96.9	75-125			

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LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

John Cocroft

Project Number: 014211290

Project: KMG - Sparboe 7N-5HZ Pad

pH by SW846 9045C/9045D - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1359375 -										
DUP (1203017571 D)	Source: 341062003				Prepared: Analyzed: 01/11/2014					
pH	7.75	0.100	SU		7.72		0-10	0.388	10	H
DUP (1203017572 D)	Source: X401068-01				Prepared: Analyzed: 01/11/2014					
pH	8.38	0.100	SU		8.13		0-10	3.03	10	H
LCS (1203017573-BKS)	Prepared: Analyzed: 01/11/2014									
pH	6.98	0.100	SU	7.00	0	99.7	99-101			

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LT Environmental, Inc.
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John Cocroft
Project Number: 014211290
Project: KMG - Sparboe 7N-5HZ Pad

TCLP Metals by 1311/3010A/6010C - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1359943 - SW846 3010A										
TB (1203017407-BLK)					Prepared: 01/14/2014 Analyzed: 01/14/2014					
Arsenic	ND	0.300	mg/L		0		-			U
MS (1203018196 S)					Source: 341048001 Prepared: 01/14/2014 Analyzed: 01/14/2014					
Arsenic	5.26	0.300	mg/L	5.00	<0.050	105	75-125			
BLANK (1203018925-BLK)					Prepared: 01/14/2014 Analyzed: 01/14/2014					
Arsenic	ND	0.300	mg/L		0		-			U
LCS (1203018926-BKS)					Prepared: 01/14/2014 Analyzed: 01/14/2014					
Arsenic	5.15	0.300	mg/L	5.00	0	103	80-120			
DUP (1203019094 D)					Source: 341048001 Prepared: 01/14/2014 Analyzed: 01/14/2014					
Arsenic	ND	0.300	mg/L		<0.050		0-20	NR	20	U

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John Cocroft
Project Number: 014211290
Project: KMG - Sparboe 7N-5HZ Pad

Notes and Definitions

- U Result not detected above the detection limit
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- J Greater than the detection limit but less than the reporting limit
- H Holding time exceeded
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference

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