



April 17, 2015

LT Environmental, Inc.

John Cocroft

4600 West 60th Avenue

Arvada

CO 80003

Project Name - KMG - UPRC - 5-3K

Project Number - 014215102

Attached are your analytical results for KMG - UPRC - 5-3K received by Origins Laboratory, Inc. April 16, 2015. This project is associated with Origins project number X504208-01.

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: 014215102
Project: KMG - UPRC - 5-3K

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01 @ 4'	X504208-01	Soil	April 16, 2015 15:25	04/16/2015 18:00
E01 @ 4'	X504208-02	Soil	April 16, 2015 15:30	04/16/2015 18:00
S01 @ 4'	X504208-03	Soil	April 16, 2015 15:35	04/16/2015 18:00
W01 @ 4'	X504208-04	Soil	April 16, 2015 15:40	04/16/2015 18:00
GW01	X504208-05	Water	April 16, 2015 15:45	04/16/2015 18:00

Origins Laboratory, Inc.



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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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X504208

ORIGINS
LABORATORY, INC

page 1 of 1

Client: LTE
Address: 4600 W 60th Ave
Telephone Number: (303) 433-9788
Email Address: Jcocroft@ltuv.com

Project Manager: J. Cocroft
Project Name: UPRC 5-3K
Project Number: 014215102
Samples Collected By: Kris Shepherd

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions		
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other	TPH	PH	EC		SAR	
N0104'	4/16/15	15:25	2	X					X				X	X	X	Hold all	1
E0104'		15:30	2	X					X				X	X	X	Run (add SAR)	2
S0104'		15:35	2	X					X				X	X	X	Hold all	3
W0104'		15:40	2	X					X				X	X	X	Hold all	4
G2001		15:45	3	X				X					X			Run BTEX	5
																	6
																	7
																	8
																	9
																	10

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:
<i>[Signature]</i>	4/16/15	1710	<i>[Signature]</i>	4/16/15	1710	Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/>
<i>[Signature]</i>	4/16/15	1800	<i>[Signature]</i>	4/16/15	1800	48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>

Date Results Needed 4/17/15 (0800)

Temp Received: 3.4

Origins Laboratory, Inc.

Jefe Pellegrini

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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XSCM208

Client: LTE

Client Project ID: UPRC 5-3K

Checklist Completed by: Jeff Smith

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

Date/time completed: 4/16/15

Airbill #: NSA

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

Cooler Number/Temperature: 1 / 3.4 °C 1 / _____ °C 1 / _____ °C (Describe)

Thermometer ID: 7253

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"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" 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 checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>	<u>WIKES</u> <input checked="" type="checkbox"/>	
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 checked="" type="checkbox"/>	<u>WIKES</u> <input checked="" type="checkbox"/>	
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.

JP
Reviewed by (Project Manager)

4/16/15
Date/Time Reviewed

Origins Laboratory, Inc.

Jeff Pellegrini

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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

N01 @ 4'
4/16/2015 3:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X504208-01 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.002	mg/kg	1	5D17005	04/17/2015	04/17/2015
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"
Surrogate: Toluene-d8	97.9 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"

pH in Soil by EPA 9045D

pH	8.69		pH Units	1	5D17007	04/17/2015	04/17/2015
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0730		mmhos/cm	"	5D17008	04/17/2015	"
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TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	50	mg/kg	1	5D17006	04/17/2015	04/17/2015
Diesel (C10-C28)	ND	50	"	"	"	"	"
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl	98.8 %	65-146			"	"	"
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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: 014215102
Project: KMG - UPRC - 5-3K

E01 @ 4'
4/16/2015 3:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X504208-02 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.002	mg/kg	1	5D16012	04/16/2015	04/16/2015
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	110 %	70-130			"	"	"
Surrogate: Toluene-d8	97.9 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"

pH in Soil by EPA 9045D

pH	8.37		pH Units	1	5D16010	04/16/2015	04/16/2015
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0980		mmhos/cm	"	5D16011	"	"
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TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	50	mg/kg	1	5D16009	04/16/2015	04/16/2015
Diesel (C10-C28)	ND	50	"	"	"	"	"
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl	113 %	65-146			"	"	"
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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: 014215102
Project: KMG - UPRC - 5-3K

S01 @ 4'
4/16/2015 3:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X504208-03 (Soil)

BTEX by EPA 8260C

Benzene	0.003	0.002	mg/kg	1	5D17005	04/17/2015	04/17/2015
Toluene	0.016	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	0.024	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"
Surrogate: Toluene-d8	97.9 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"

pH in Soil by EPA 9045D

pH	9.30		pH Units	1	5D17007	04/17/2015	04/17/2015
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0852		mmhos/cm	"	5D17008	04/17/2015	"
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TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	50	mg/kg	1	5D17006	04/17/2015	04/17/2015
Diesel (C10-C28)	ND	50	"	"	"	"	"
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl	99.6 %	65-146			"	"	"
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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: 014215102
Project: KMG - UPRC - 5-3K

W01 @ 4'
4/16/2015 3:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X504208-04 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.002	mg/kg	1	5D17005	04/17/2015	04/17/2015
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"
Surrogate: Toluene-d8	98.8 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"

pH in Soil by EPA 9045D

pH	8.56		pH Units	1	5D17007	04/17/2015	04/17/2015
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0675		mmhos/cm	"	5D17008	04/17/2015	"
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TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	50	mg/kg	1	5D17006	04/17/2015	04/17/2015
Diesel (C10-C28)	ND	50	"	"	"	"	"
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"

Surrogate: o-Terphenyl	95.3 %	65-146			"	"	"
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LT Environmental, Inc.
4600 West 60th Avenue
Arvada CO 80003

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

GW01

4/16/2015 3:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X504208-05 (Water)

BTEX by EPA 8260C

Benzene	5.2	1.0	ug/L	1	5D16008	04/16/2015	04/16/2015
Toluene	16.1	1.0	"	"	"	"	"
Ethylbenzene	3.9	1.0	"	"	"	"	"
Xylenes, total	9.3	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	101 %	87.3-113			"	"	"
Surrogate: Toluene-d8	98.2 %	90.9-108			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	88.6-111			"	"	"

Origins Laboratory, Inc.



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Arvada CO 80003

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D16008 - EPA 5030B (Water)

Blank (5D16008-BLK1)

Prepared: 04/16/2015 Analyzed: 04/16/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	62		"	625000	0.00998		87.3-113			
Surrogate: Toluene-d8	63		"	625000	0.0100		90.9-108			
Surrogate: 4-Bromofluorobenzene	62		"	625000	0.00990		88.6-111			

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Arvada CO 80003

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D16008 - EPA 5030B (Water)

LCS (5D16008-BS1)

Prepared: 04/16/2015 Analyzed: 04/16/2015

Benzene	49.0	1.0	ug/L	50.0		97.9	75-126			
Toluene	47.8	1.0	"	50.0		95.7	78.7-126			
Ethylbenzene	50.2	1.0	"	50.0		100	80-130			
m,p-Xylene	100	2.0	"	100		100	77.2-133			
o-Xylene	50.2	1.0	"	50.0		100	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	62		"	625000		0.00989	87.3-113			
Surrogate: Toluene-d8	61		"	625000		0.00970	90.9-108			
Surrogate: 4-Bromofluorobenzene	65		"	625000		0.0103	88.6-111			

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Arvada CO 80003

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D16008 - EPA 5030B (Water)

Matrix Spike (5D16008-MS1)		Source: X504175-01			Prepared: 04/16/2015 Analyzed: 04/16/2015					
Benzene	51.8	1.0	ug/L	50.0	0.3	103	74-130			
Toluene	50.3	1.0	"	50.0	0.4	99.9	73-131			
Ethylbenzene	52.1	1.0	"	50.0	ND	104	76-132			
m,p-Xylene	104	2.0	"	100	ND	104	69-139			
o-Xylene	52.0	1.0	"	50.0	ND	104	74-131			
Surrogate: 1,2-Dichloroethane-d4	63		"	625000		0.0101	87.3-113			
Surrogate: Toluene-d8	63		"	625000		0.0101	90.9-108			
Surrogate: 4-Bromofluorobenzene	62		"	625000		0.00989	88.6-111			

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Arvada CO 80003

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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
Batch 5D16008 - EPA 5030B (Water)										
Matrix Spike Dup (5D16008-MSD1)		Source: X504175-01			Prepared: 04/16/2015 Analyzed: 04/16/2015					
Benzene	48.7	1.0	ug/L	50.0	0.3	96.7	74-130	6.21	20	
Toluene	46.8	1.0	"	50.0	0.4	92.9	73-131	7.20	20	
Ethylbenzene	48.8	1.0	"	50.0	ND	97.5	76-132	6.64	20	
m,p-Xylene	97.5	2.0	"	100	ND	97.5	69-139	6.65	20	
o-Xylene	47.7	1.0	"	50.0	ND	95.5	74-131	8.48	20	
Surrogate: 1,2-Dichloroethane-d4	63		"	625000		0.0100	87.3-113			
Surrogate: Toluene-d8	61		"	625000		0.00984	90.9-108			
Surrogate: 4-Bromofluorobenzene	63		"	625000		0.0101	88.6-111			

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Arvada CO 80003

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D16012 - EPA 5030 (soil)

Blank (5D16012-BLK1)

Prepared: 04/16/2015 Analyzed: 04/16/2015

Benzene	ND	0.002	mg/kg							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	74		ug/kg	625000		0.0119	70-130			
Surrogate: Toluene-d8	59		"	625000		0.00949	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	625000		0.00986	70-130			

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4600 West 60th Avenue
Arvada CO 80003

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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
Batch 5D16012 - EPA 5030 (soil)										
LCS (5D16012-BS1)					Prepared: 04/16/2015 Analyzed: 04/16/2015					
Benzene	0.082	0.002	mg/kg	0.100		82.0	77.1-124			
Toluene	0.080	0.002	"	0.100		80.1	74.5-128			
Ethylbenzene	0.081	0.002	"	0.100		81.1	66.4-127			
m,p-Xylene	0.163	0.004	"	0.200		81.5	76.6-124			
o-Xylene	0.082	0.002	"	0.100		82.4	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	625000		0.0101	70-130			
Surrogate: Toluene-d8	62		"	625000		0.00997	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	625000		0.0101	70-130			

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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D16012 - EPA 5030 (soil)

Matrix Spike (5D16012-MS1)		Source: X504205-01			Prepared: 04/16/2015 Analyzed: 04/16/2015					
Benzene	0.084	0.002	mg/kg	0.100	ND	84.1	71.8-126			
Toluene	0.083	0.002	"	0.100	ND	82.5	65.1-130			
Ethylbenzene	0.084	0.002	"	0.100	ND	84.0	62.2-130			
m,p-Xylene	0.168	0.004	"	0.200	ND	84.1	46.5-137			
o-Xylene	0.084	0.002	"	0.100	ND	84.5	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	625000		0.0101	70-130			
Surrogate: Toluene-d8	62		"	625000		0.00985	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	625000		0.0101	70-130			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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
Batch 5D16012 - EPA 5030 (soil)										
Matrix Spike Dup (5D16012-MSD1)					Source: X504205-01					Prepared: 04/16/2015 Analyzed: 04/16/2015
Benzene	0.084	0.002	mg/kg	0.100	ND	84.1	71.8-126	0.00	11.3	
Toluene	0.082	0.002	"	0.100	ND	82.1	65.1-130	0.486	15.4	
Ethylbenzene	0.083	0.002	"	0.100	ND	83.4	62.2-130	0.764	19.6	
m,p-Xylene	0.168	0.004	"	0.200	ND	83.8	46.5-137	0.381	19.2	
o-Xylene	0.084	0.002	"	0.100	ND	84.2	54.2-134	0.332	17.9	
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	625000		0.0102	70-130			
Surrogate: Toluene-d8	61		"	625000		0.00981	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	625000		0.0100	70-130			

Origins Laboratory, Inc.



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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D17005 - EPA 5030 (soil)

Blank (5D17005-BLK1)

Prepared: 04/17/2015 Analyzed: 04/17/2015

Benzene	ND	0.002	mg/kg							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5	105	70-130				
Surrogate: Toluene-d8	62		"	62.5	98.6	70-130				
Surrogate: 4-Bromofluorobenzene	64		"	62.5	102	70-130				

Origins Laboratory, Inc.



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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D17005 - EPA 5030 (soil)

LCS (5D17005-BS1)

Prepared: 04/17/2015 Analyzed: 04/17/2015

Benzene	0.088	0.002	mg/kg	0.100		88.4	77.1-124			
Toluene	0.086	0.002	"	0.100		86.1	74.5-128			
Ethylbenzene	0.087	0.002	"	0.100		86.9	66.4-127			
m,p-Xylene	0.174	0.004	"	0.200		87.1	76.6-124			
o-Xylene	0.088	0.002	"	0.100		88.2	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D17005 - EPA 5030 (soil)

Matrix Spike (5D17005-MS1)		Source: X504208-01			Prepared: 04/17/2015 Analyzed: 04/17/2015					
Benzene	0.089	0.002	mg/kg	0.100	ND	89.2	71.8-126			
Toluene	0.089	0.002	"	0.100	ND	88.9	65.1-130			
Ethylbenzene	0.096	0.002	"	0.100	ND	96.4	62.2-130			
m,p-Xylene	0.193	0.004	"	0.200	ND	96.4	46.5-137			
o-Xylene	0.097	0.002	"	0.100	ND	96.9	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

Origins Laboratory, Inc.



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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D17005 - EPA 5030 (soil)

Matrix Spike Dup (5D17005-MSD1)		Source: X504208-01			Prepared: 04/17/2015 Analyzed: 04/17/2015					
Benzene	0.088	0.002	mg/kg	0.100	ND	87.7	71.8-126	1.67	11.3	
Toluene	0.086	0.002	"	0.100	ND	85.7	65.1-130	3.69	15.4	
Ethylbenzene	0.091	0.002	"	0.100	ND	91.5	62.2-130	5.24	19.6	
m,p-Xylene	0.182	0.004	"	0.200	ND	91.1	46.5-137	5.66	19.2	
o-Xylene	0.092	0.002	"	0.100	ND	91.8	54.2-134	5.42	17.9	
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	70-130			

Origins Laboratory, Inc.



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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 8015C - 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 5D16009 - EPA 3580

Blank (5D16009-BLK1)

Prepared: 04/16/2015 Analyzed: 04/16/2015

Gasoline (C6-C10)	ND	50	mg/kg
Diesel (C10-C28)	ND	50	"
Residual Range Organics (C28-C36)	ND	200	"

Surrogate: o-Terphenyl

51.7

"

50.0

103

65-146

LCS (5D16009-BS1)

Prepared: 04/16/2015 Analyzed: 04/16/2015

Gasoline (C6-C10)	930	50	mg/kg	1000	93.3	66.7-119
Diesel (C10-C28)	1100	50	"	1000	107	70.1-127
Residual Range Organics (C28-C36)	870	200	"	1000	87.3	54.5-139

Surrogate: o-Terphenyl

47.2

"

50.0

94.4

65-146

LCS Dup (5D16009-BSD1)

Prepared: 04/16/2015 Analyzed: 04/16/2015

Gasoline (C6-C10)	960	50	mg/kg	1000	96.1	66.7-119	2.91	28.2
Diesel (C10-C28)	1100	50	"	1000	114	70.1-127	6.44	19.1
Residual Range Organics (C28-C36)	930	200	"	1000	92.8	54.5-139	6.14	21.2

Surrogate: o-Terphenyl

49.1

"

50.0

98.3

65-146

Batch 5D17006 - EPA 3580

Blank (5D17006-BLK1)

Prepared: 04/17/2015 Analyzed: 04/17/2015

Gasoline (C6-C10)	ND	50	mg/kg
Diesel (C10-C28)	ND	50	"

Origins Laboratory, Inc.



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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5D17006 - EPA 3580										
Blank (5D17006-BLK1)					Prepared: 04/17/2015 Analyzed: 04/17/2015					
Residual Range Organics (C28-C36)	ND	200	mg/kg							
Surrogate: o-Terphenyl	50.0		"	50.0		100	65-146			
LCS (5D17006-BS1)					Prepared: 04/17/2015 Analyzed: 04/17/2015					
Gasoline (C6-C10)	890	50	mg/kg	1000		89.2	66.7-119			
Diesel (C10-C28)	1100	50	"				70.1-127			
Residual Range Organics (C28-C36)	620	200	"	1000		62.5	54.5-139			
Surrogate: o-Terphenyl	47.0		"	50.0		94.1	65-146			
Matrix Spike (5D17006-MS1)					Source: X504208-01		Prepared: 04/17/2015 Analyzed: 04/17/2015			
Gasoline (C6-C10)	910	50	mg/kg	1000	17	88.9	56.4-132			
Diesel (C10-C28)	1100	50	"		ND		57.4-138			
Residual Range Organics (C28-C36)	640	200	"	1000	ND	63.7	47.7-129			
Surrogate: o-Terphenyl	45.1		"	50.0		90.2	65-146			
Matrix Spike Dup (5D17006-MSD1)					Source: X504208-01		Prepared: 04/17/2015 Analyzed: 04/17/2015			
Gasoline (C6-C10)	920	50	mg/kg	1000	17	90.7	56.4-132	1.96	22	
Diesel (C10-C28)	1100	50	"		ND		57.4-138	2.63	18.3	
Residual Range Organics (C28-C36)	660	200	"	1000	ND	66.1	47.7-129	3.70	30.1	
Surrogate: o-Terphenyl	48.4		"	50.0		96.8	65-146			

Origins Laboratory, Inc.



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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D16010 - NO PREP										
Duplicate (5D16010-DUP1)		Source: X504205-01			Prepared: 04/16/2015 Analyzed: 04/16/2015					
pH	7.50		pH Units		7.54			0.532	25	
Batch 5D16011 - NO PREP										
Blank (5D16011-BLK1)		Prepared: 04/16/2015 Analyzed: 04/16/2015								
Specific Conductance (EC)	0.00300		mmhos/cm							
Duplicate (5D16011-DUP1)		Source: X504205-01			Prepared: 04/16/2015 Analyzed: 04/16/2015					
Specific Conductance (EC)	0.0905		mmhos/cm		0.0894			1.22	25	
Batch 5D17007 - NO PREP										
Duplicate (5D17007-DUP1)		Source: X504208-03			Prepared: 04/17/2015 Analyzed: 04/17/2015					
pH	9.25		pH Units		9.30			0.539	25	
Batch 5D17008 - NO PREP										
Blank (5D17008-BLK1)		Prepared: 04/17/2015 Analyzed: 04/17/2015								
Specific Conductance (EC)	0.00340		mmhos/cm							
Duplicate (5D17008-DUP1)		Source: X504208-03			Prepared: 04/17/2015 Analyzed: 04/17/2015					
Specific Conductance (EC)	0.0794		mmhos/cm		0.0852			7.05	25	

Origins Laboratory, Inc.



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LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

John Cocroft

Project Number: 014215102

Project: KMG - UPRC - 5-3K

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President



April 28, 2015

LT Environmental, Inc.

John Cocroft

4600 West 60th Avenue

Arvada

CO 80003

Project Name - KMG - UPRC - 5-3K

Project Number - 014215102

Attached are your analytical results for KMG - UPRC - 5-3K received by Origins Laboratory, Inc. April 27, 2015. This project is associated with Origins project number X504313-01.

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: 014215102

Project: KMG - UPRC - 5-3K

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW02	X504313-01	Water	April 27, 2015 10:45	04/27/2015 17:05

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini For Noelle Doyle Mathis, President

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

ORIGINS

LABORATORY, INC

www.originslaboratory.com

X5041313

page 1 of 1

Client: LTE

Address: 4600 W 60th Ave

Avondale CO 80003

Telephone Number: 303-433-9788

Email Address: IT@originslab.com / See 1st

Project Manager: John Cocroft

Project Name: UPRL 5-3K

Project Number: 014215102

Samples Collected By: Chad Teirt

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other				
Gw02	4/27/15	1015	3	X					X				X	1	Sample Instructions
														2	
														3	
														4	
														5	
														6	
														7	
														8	
														9	
														10	
Relinquished By: <u>ALZ</u>	Date: <u>4/27/15</u>	Time: <u>1700</u>	Received By: <u>[Signature]</u>	Date: <u>4.27.15</u>	Time: <u>1705</u>	Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>									
Relinquished By:	Date:	Time:	Received By:	Date:	Time:										

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

Temp Received: 29 Date Results Needed

Origins Laboratory, Inc.

Jeff Pellipini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X504313

Client: LTE

Client Project ID: UPRC 5-3K

Checklist Completed by: Jeff Smith

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

Date/time completed: 4/27/15

Airbill #: PSA

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

Cooler Number/Temperature: 1 12.9 °C 1 °C 1 °C (Describe) 1 °C

Thermometer ID: T003

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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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 checked="" type="checkbox"/>	<input type="checkbox"/>	
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 checked="" type="checkbox"/>	<input type="checkbox"/>	
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.

Jeff Smith
Reviewed by (Project Manager)

4/27/15
Date/Time Reviewed

Origins Laboratory, Inc.

Jeff Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

GW02

4/27/2015 10:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X504313-01 (Water)

BTEX by EPA 8260C

Benzene	1.0	1.0	ug/L	1	5D27012	04/27/2015	04/27/2015
Toluene	1.6	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	4.3	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	107 %	87.3-113			"	"	"
Surrogate: Toluene-d8	100 %	90.9-108			"	"	"
Surrogate: 4-Bromofluorobenzene	90.5 %	88.6-111			"	"	"

Origins Laboratory, Inc.



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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D27012 - EPA 5030B (Water)

Blank (5D27012-BLK1)

Prepared: 04/27/2015 Analyzed: 04/27/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5	107		87.3-113			
Surrogate: Toluene-d8	62		"	62.5	98.9		90.9-108			
Surrogate: 4-Bromofluorobenzene	57		"	62.5	91.7		88.6-111			

Origins Laboratory, Inc.



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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D27012 - EPA 5030B (Water)

LCS (5D27012-BS1)

Prepared: 04/27/2015 Analyzed: 04/27/2015

Benzene	53.7	1.0	ug/L	50.0	107	75-126
Toluene	54.9	1.0	"	50.0	110	78.7-126
Ethylbenzene	59.1	1.0	"	50.0	118	80-130
m,p-Xylene	116	2.0	"	100	116	77.2-133
o-Xylene	55.0	1.0	"	50.0	110	77.9-126
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5	99.6	87.3-113
Surrogate: Toluene-d8	62		"	62.5	99.5	90.9-108
Surrogate: 4-Bromofluorobenzene	58		"	62.5	93.0	88.6-111

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

John Cocroft
Project Number: 014215102
Project: KMG - UPRC - 5-3K

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 5D27012 - EPA 5030B (Water)

Matrix Spike (5D27012-MS1)		Source: X504282-01			Prepared: 04/27/2015 Analyzed: 04/27/2015					
Benzene	46.9	1.0	ug/L	50.0	ND	93.9	74-130			
Toluene	48.0	1.0	"	50.0	ND	96.1	73-131			
Ethylbenzene	49.1	1.0	"	50.0	ND	98.2	76-132			
m,p-Xylene	94.8	2.0	"	100	ND	94.8	69-139			
o-Xylene	45.2	1.0	"	50.0	ND	90.5	74-131			
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		101	87.3-113			
Surrogate: Toluene-d8	62		"	62.5		99.4	90.9-108			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		93.4	88.6-111			

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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 5D27012 - EPA 5030B (Water)

Matrix Spike Dup (5D27012-MSD1)		Source: X504282-01			Prepared: 04/27/2015 Analyzed: 04/27/2015					
Benzene	48.2	1.0	ug/L	50.0	ND	96.4	74-130	2.67	20	
Toluene	48.1	1.0	"	50.0	ND	96.2	73-131	0.146	20	
Ethylbenzene	49.7	1.0	"	50.0	ND	99.3	76-132	1.13	20	
m,p-Xylene	97.7	2.0	"	100	ND	97.7	69-139	3.03	20	
o-Xylene	48.4	1.0	"	50.0	ND	96.7	74-131	6.67	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.5	87.3-113			
Surrogate: Toluene-d8	62		"	62.5		98.9	90.9-108			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		92.8	88.6-111			

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Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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Jen Pellegrini For Noelle Doyle Mathis, President