



February 09, 2016

LT Environmental, Inc.

John Cocroft

4600 West 60th Avenue

Arvada

CO 80003

**Project Name - KMG - HSR 6-13X**

**Project Number - 014216034/WO# 890098**

Attached are your analytical results for KMG - HSR 6-13X received by Origins Laboratory, Inc. February 08, 2016. This project is associated with Origins project number X602063-01.

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: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01 @ 5'	X602063-01	Soil	February 8, 2016 10:35	02/08/2016 16:40
E01 @ 5'	X602063-02	Soil	February 8, 2016 10:40	02/08/2016 16:40
S01 @ 5'	X602063-03	Soil	February 8, 2016 10:45	02/08/2016 16:40
W01 @ 5'	X602063-04	Soil	February 8, 2016 10:50	02/08/2016 16:40
W02 @ 5'	X602063-05	Soil	February 8, 2016 10:55	02/08/2016 16:40
GW01	X602063-07	Water	February 8, 2016 11:10	02/08/2016 16:40

Origins Laboratory, Inc.



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John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

# ORIGINS

LABORATORY, INC

www.originslaboratory.com

1602063

page 1 of 1

Client: LTE  
 Address: 4600 W 60TH AVE  
 Telephone Number: 303-433-9788  
 Email Address: APC Team

Project Manager: John Corcuff  
 Project Name: H5R 6-13X  
 Project Number: 014216034  
 Samples Collected By: Kris Shepherd

APC 100# 870018147

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions	
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #	Other	As	Fe	NO <sub>3</sub>		
D0105'	2/8/16	1055	2	X					X		X	X	X	X	Hold SAR	1
E0105'		1040	2	X					X		X	X	X			2
S0105'		1045	2	X					X		X	X	X			3
W0105'		1050	2	X					X		X	X	X			4
W0205'		1055	2	X					X		X	X	X		↓	5
B0101		1100	2	X					X						Hold All	6
G0101		1110	3	X				X						X	Run BTEX	7
																8
																9
																10
Relinquished By: <u>[Signature]</u>	Date: <u>2/8/2015</u>	Time: <u>1000</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: <u>[Signature]</u>	Date: <u>2-8-16</u>	Time: <u>1800</u>														

Date Results Needed 2/9/16 (800)

Origins Laboratory, Inc.

Jeff Pellipini

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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: X602063

Client: LTE

Client Project ID: HSR 6-13X

Checklist Completed by: Jeff Smith

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

Date/time completed: 2/8/16

Airbill #: N/A

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

Cooler Number/Temperature: 1 12.4 °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 <sup>(1)</sup> ?	<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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<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"/>		
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (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 <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		
Additional Comments (if any):				

<sup>(1)</sup> 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)

2/8/16  
Date/Time Reviewed

Origins Laboratory, Inc.

*Jen Pellegrini*

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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

N01 @ 5'  
2/8/2016 10:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X602063-01 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	1200	25	mg/kg	1	B6B0805	02/08/2016	02/08/2016
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"

Surrogate: o-Terphenyl	97.5 %	59-131			"	"	"
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**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	2230	50.0	mg/kg	250	B6B0806	02/08/2016	02/08/2016
Benzene	19.1	0.498	"	"	"	"	"
Toluene	62.1	0.995	"	500	"	"	02/09/2016
Ethylbenzene	11.2	0.498	"	250	"	"	02/08/2016
Xylenes, total	123	0.498	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	122 %	70-130			"	"	"
Surrogate: Toluene-d8	121 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"

**pH in Soil by EPA 9045D**

pH	7.85		pH Units	1	B6B0807	02/08/2016	02/08/2016
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0707		mmhos/cm	"	B6B0808	02/08/2016	02/08/2016
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John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

E01 @ 5'  
2/8/2016 10:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X602063-02 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	25	mg/kg	1	B6B0805	02/08/2016	02/08/2016
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"

Surrogate: o-Terphenyl 70.8 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6B0806	02/08/2016	02/08/2016
Benzene	ND	0.002	"	"	"	"	"
Toluene	ND	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4 104 % 70-130 " " "  
Surrogate: Toluene-d8 106 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 99.5 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	6.80		pH Units	1	B6B0807	02/08/2016	02/08/2016
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0689		mmhos/cm	"	B6B0808	02/08/2016	02/08/2016
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John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**S01 @ 5'**  
**2/8/2016 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X602063-03 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	25	mg/kg	1	B6B0805	02/08/2016	02/08/2016
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"

Surrogate: o-Terphenyl	86.5 %	59-131			"	"	"
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**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6B0806	02/08/2016	02/08/2016
Benzene	<b>0.017</b>	0.002	"	"	"	"	"
Toluene	<b>0.009</b>	0.002	"	"	"	"	"
Ethylbenzene	ND	0.002	"	"	"	"	"
Xylenes, total	ND	0.002	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"
Surrogate: Toluene-d8	100 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	93.9 %	70-130			"	"	"

**pH in Soil by EPA 9045D**

pH	<b>6.93</b>		pH Units	1	B6B0807	02/08/2016	02/08/2016
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	<b>0.0719</b>		mmhos/cm	"	B6B0808	02/08/2016	02/08/2016
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4600 West 60th Avenue  
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John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

W01 @ 5'  
2/8/2016 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X602063-04 (Soil)

## DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25	mg/kg	1	B6B0805	02/08/2016	02/08/2016
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"

Surrogate: o-Terphenyl	62.6 %	59-131			"	"	"
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## GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B6B0806	02/08/2016	02/08/2016
Benzene	0.169	0.100	"	50	"	"	"
Toluene	0.420	0.100	"	"	"	"	"
Ethylbenzene	ND	0.100	"	"	"	"	"
Xylenes, total	0.331	0.100	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	101 %	70-130			"	"	"
Surrogate: Toluene-d8	102 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	97.1 %	70-130			"	"	"

## pH in Soil by EPA 9045D

pH	7.33		pH Units	1	B6B0807	02/08/2016	02/08/2016
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## Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0291		mmhos/cm	"	B6B0808	02/08/2016	02/08/2016
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4600 West 60th Avenue  
Arvada CO 80003

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

W02 @ 5'  
2/8/2016 10:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X602063-05 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	25	mg/kg	1	B6B0805	02/08/2016	02/08/2016
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"

Surrogate: o-Terphenyl	65.1 %	59-131			"	"	"
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**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B6B0806	02/08/2016	02/08/2016
Benzene	ND	0.100	"	50	"	"	"
Toluene	ND	0.100	"	"	"	"	"
Ethylbenzene	ND	0.100	"	"	"	"	"
Xylenes, total	ND	0.100	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	95.8 %	70-130			"	"	"
Surrogate: Toluene-d8	101 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	92.2 %	70-130			"	"	"

**pH in Soil by EPA 9045D**

pH	7.32		pH Units	1	B6B0807	02/08/2016	02/08/2016
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0378		mmhos/cm	"	B6B0808	02/08/2016	02/08/2016
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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO 80003

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

GW01  
2/8/2016 11:10:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X602063-07 (Water)

**BTEX by EPA 8260C**

Benzene	3630	100	ug/L	100	B6B0501	02/08/2016	02/08/2016
Toluene	6090	100	"	"	"	"	"
Ethylbenzene	232	4.0	"	4	"	"	02/08/2016
Xylenes, total	3200	100	"	100	"	"	02/08/2016

Surrogate: 1,2-Dichloroethane-d4	106 %	84-121			"	"	02/08/2016
Surrogate: Toluene-d8	104 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	97.0 %	84-114			"	"	"

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Arvada CO 80003

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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
<b>Batch B6B0501 - EPA 5030B (Water)</b>										
<b>Blank (B6B0501-BLK1)</b>					Prepared: 02/05/2016 Analyzed: 02/08/2016					
Benzene	ND	1.0	ug/L							U
Toluene	ND	1.0	"							U
Ethylbenzene	ND	1.0	"							U
Xylenes, total	ND	1.0	"							U
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5	109		84-121			
Surrogate: Toluene-d8	63		"	62.5	101		85-115			
Surrogate: 4-Bromofluorobenzene	60		"	62.5	95.7		84-114			

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Project: KMG - HSR 6-13X

**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
<b>Batch B6B0501 - EPA 5030B (Water)</b>										
<b>LCS (B6B0501-BS1)</b>					Prepared: 02/05/2016 Analyzed: 02/08/2016					
Benzene	46.8	1.0	ug/L	50.0		93.7	73.3-129			
Toluene	46.8	1.0	"	50.0		93.5	76.2-123			
Ethylbenzene	47.4	1.0	"	50.0		94.7	73.6-130			
m,p-Xylene	93.8	2.0	"	100		93.8	76.1-126			
o-Xylene	46.8	1.0	"	50.0		93.7	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	84-121			
Surrogate: Toluene-d8	64		"	62.5		103	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.6	84-114			

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Project: KMG - HSR 6-13X

**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 B6B0501 - EPA 5030B (Water)**

Matrix Spike (B6B0501-MS1)		Source: X602051-03			Prepared: 02/05/2016 Analyzed: 02/08/2016					
Benzene	46.4	1.0	ug/L	50.0	ND	92.9	74-130			
Toluene	45.3	1.0	"	50.0	ND	90.6	73-131			
Ethylbenzene	45.3	1.0	"	50.0	ND	90.5	76-132			
m,p-Xylene	91.1	2.0	"	100	ND	91.1	69-139			
o-Xylene	45.1	1.0	"	50.0	ND	90.1	74-131			
Surrogate: 1,2-Dichloroethane-d4	72		"	62.5		114	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.6	84-114			

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4600 West 60th Avenue  
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John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0501 - EPA 5030B (Water)**

Matrix Spike Dup (B6B0501-MSD1)		Source: X602051-03			Prepared: 02/05/2016 Analyzed: 02/08/2016					
Benzene	40.0	1.0	ug/L	50.0	ND	79.9	74-130	15.0	20	
Toluene	38.9	1.0	"	50.0	ND	77.9	73-131	15.1	20	
Ethylbenzene	39.8	1.0	"	50.0	ND	79.6	76-132	12.9	20	
m,p-Xylene	79.9	2.0	"	100	ND	79.9	69-139	13.1	20	
o-Xylene	41.6	1.0	"	50.0	ND	83.2	74-131	7.99	20	
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.5	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

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4600 West 60th Avenue  
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Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0806 - EPA 5030 (soil)**

**Blank (B6B0806-BLK1)**

Prepared: 02/08/2016 Analyzed: 02/08/2016

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	63.3		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	64.4		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	60.7		"	62.5		97.1	70-130			

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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
<b>Batch B6B0806 - EPA 5030 (soil)</b>										
<b>LCS (B6B0806-BS1)</b>					Prepared: 02/08/2016 Analyzed: 02/08/2016					
Benzene	0.107	0.002	mg/kg	0.100		107	77.1-124			
Toluene	0.106	0.002	"	0.100		106	74.5-128			
Ethylbenzene	0.104	0.002	"	0.100		104	66.4-127			
m,p-Xylene	0.206	0.004	"	0.200		103	76.6-124			
o-Xylene	0.108	0.002	"	0.100		108	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	67.6		ug/kg	62.5		108	70-130			
Surrogate: Toluene-d8	66.0		"	62.5		106	70-130			
Surrogate: 4-Bromofluorobenzene	64.5		"	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: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0806 - EPA 5030 (soil)**

Matrix Spike (B6B0806-MS1)		Source: X602063-02			Prepared: 02/08/2016 Analyzed: 02/08/2016					
Benzene	0.093	0.002	mg/kg	0.100	0.0008	92.1	71.8-126			
Toluene	0.089	0.002	"	0.100	ND	89.4	65.1-130			
Ethylbenzene	0.099	0.002	"	0.100	ND	99.3	62.2-130			
m,p-Xylene	0.198	0.004	"	0.200	0.0009	99.2	46.5-137			
o-Xylene	0.099	0.002	"	0.100	ND	98.7	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	58.5		ug/kg	62.5		93.7	70-130			
Surrogate: Toluene-d8	58.1		"	62.5		92.9	70-130			
Surrogate: 4-Bromofluorobenzene	67.7		"	62.5		108	70-130			

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0806 - EPA 5030 (soil)**

Matrix Spike Dup (B6B0806-MSD1)		Source: X602063-02			Prepared: 02/08/2016 Analyzed: 02/08/2016					
Benzene	0.098	0.002	mg/kg	0.100	0.0008	97.1	71.8-126	5.24	11.3	
Toluene	0.092	0.002	"	0.100	ND	91.6	65.1-130	2.43	15.4	
Ethylbenzene	0.099	0.002	"	0.100	ND	98.5	62.2-130	0.748	19.6	
m,p-Xylene	0.192	0.004	"	0.200	0.0009	95.8	46.5-137	3.58	19.2	
o-Xylene	0.098	0.002	"	0.100	ND	97.6	54.2-134	1.14	17.9	
Surrogate: 1,2-Dichloroethane-d4	62.0		ug/kg	62.5		99.2	70-130			
Surrogate: Toluene-d8	59.9		"	62.5		95.8	70-130			
Surrogate: 4-Bromofluorobenzene	61.9		"	62.5		99.0	70-130			

Origins Laboratory, Inc.



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Arvada CO 80003

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0805 - EPA 3580**

**Blank (B6B0805-BLK1)**

Prepared: 02/08/2016 Analyzed: 02/08/2016

Diesel (C10-C28) ND 50 mg/kg

Residual Range Organics (C28-C40) ND 200 "

Surrogate: o-Terphenyl 63 " 50.0 126 59-131

**LCS (B6B0805-BS1)**

Prepared: 02/08/2016 Analyzed: 02/08/2016

Diesel (C10-C28) 1000 50 mg/kg 1000 103 64-121

Residual Range Organics (C28-C40) 1100 200 " 1000 105 58-124

Surrogate: o-Terphenyl 55 " 50.0 110 59-131

**LCS Dup (B6B0805-BSD1)**

Prepared: 02/08/2016 Analyzed: 02/08/2016

Diesel (C10-C28) 940 50 mg/kg 1000 94.0 64-121 9.19 20

Residual Range Organics (C28-C40) 930 200 " 1000 92.9 58-124 12.6 20

Surrogate: o-Terphenyl 50 " 50.0 99.1 59-131

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B6B0807 - NO PREP</b>										
<b>Duplicate (B6B0807-DUP1)</b>		<b>Source: X602063-01</b>			Prepared: 02/08/2016 Analyzed: 02/08/2016					
pH	7.84		pH Units		7.85			0.127	25	
<b>Batch B6B0808 - NO PREP</b>										
<b>Blank (B6B0808-BLK1)</b>		Prepared: 02/08/2016 Analyzed: 02/08/2016								
Specific Conductance (EC)	0.00340		mmhos/cm							
<b>Duplicate (B6B0808-DUP1)</b>		<b>Source: X602063-01</b>			Prepared: 02/08/2016 Analyzed: 02/08/2016					
Specific Conductance (EC)	0.0709		mmhos/cm		0.0707			0.282	25	

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

### Notes and Definitions

U Sample is Non-Detect.

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.



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February 10, 2016

LT Environmental, Inc.

John Cocroft

4600 West 60th Avenue

Arvada

CO 80003

**Project Name - KMG - HSR 6-13X**

**Project Number - 014216034**

Attached are your analytical results for KMG - HSR 6-13X received by Origins Laboratory, Inc. February 09, 2016. This project is associated with Origins project number X602076-01.

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: 014216034

Project: KMG - HSR 6-13X

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N02 @ 5'	X602076-01	Soil	February 9, 2016 14:25	02/09/2016 16:16

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.*

John Cocroft  
Project Number: 014216034  
Project: KMG - HSR 6-13X

**ORIGINS**

LABORATORY, INC

**X602076**

www.originslaboratory.com

page 1 of 1

Client: **LTE**

Project Manager: **J. Cocroft**

Address:

**4600 W 60TH Ave**

Project Name: **HSR 6-3X**

Telephone Number:

**303-433-9788**

Project Number: **014216054**

Samples Collected By: **Kris Shepherd**

Email Address:

**Jcocroft@ltni.com**

Fax: 303.265.9645

Phone: 303.433.1322

Denver, CO 80211

1725 Elk Place

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #			Other
N02051	2/9/16	1425	2	X					X		X X X X	only H2O SAR	1
													2
													3
													4
													5
													6
													7
													8
													9
													10
Relinquished By: <i>[Signature]</i>	Date: 2/9/16	Time: 1530	Received By: <i>[Signature]</i>	Date: 2-9-16	Time: 15:30	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: <i>[Signature]</i>	Date: 2-9-16	Time: 1615	Received By: <i>[Signature]</i>	Date: 2/9/16	Time: 1616								

96

Date Results Needed

2/10/16 (PRCO)

Origins Laboratory, Inc.

Jeff Pellipini

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

John Cocroft  
Project Number: 014216034  
Project: KMG - HSR 6-13X

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: X602076

Client: LTE

Client Project ID: HSR 6-13x

Checklist Completed by: Jeff Smith

Shipped Via: H/D  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 2/9/16

Airbill #: NA

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

Cooler Number/Temperature: 1 / 8.6 °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 <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		<u>Sampled Same Day</u>
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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			<u>PH</u>
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<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"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (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 <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup> 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) Jeff Smith

Date/Time Reviewed 2/9/16

Origins Laboratory, Inc.

*Jeff Pellegrini*

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

John Cocroft  
Project Number: 014216034  
Project: KMG - HSR 6-13X

N02 @ 5'  
2/9/2016 2:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X602076-01 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	25	mg/kg	1	B6B0904	02/09/2016	02/09/2016	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl 98.9 % 59-131 " " "

**GBTEX by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6B0810	02/09/2016	02/09/2016	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 99.3 % 70-130 " " "  
Surrogate: Toluene-d8 94.6 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 96.5 % 70-130 " " "

**pH in Soil by EPA 9045D**

pH	7.95		pH Units	1	B6B0906	02/09/2016	02/09/2016	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0501		mmhos/cm	"	B6B0907	02/09/2016	"	
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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: 014216034  
Project: KMG - HSR 6-13X

**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
<b>Batch B6B0810 - EPA 5030 (soil)</b>										
<b>Blank (B6B0810-BLK1)</b>					Prepared: 02/09/2016 Analyzed: 02/09/2016					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Surrogate: 1,2-Dichloroethane-d4	62.9		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	64.3		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	55.3		"	62.5		88.5	70-130			

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034  
Project: KMG - HSR 6-13X

**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
<b>Batch B6B0810 - EPA 5030 (soil)</b>										
<b>LCS (B6B0810-BS1)</b>					Prepared: 02/09/2016 Analyzed: 02/09/2016					
Benzene	0.102	0.002	mg/kg	0.100		102	77.1-124			
Toluene	0.105	0.002	"	0.100		105	74.5-128			
Ethylbenzene	0.092	0.002	"	0.100		91.5	66.4-127			
m,p-Xylene	0.178	0.004	"	0.200		89.2	76.6-124			
o-Xylene	0.094	0.002	"	0.100		94.0	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	68.4		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	68.7		"	62.5		110	70-130			
Surrogate: 4-Bromofluorobenzene	62.4		"	62.5		99.9	70-130			

Origins Laboratory, Inc.



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4600 West 60th Avenue  
Arvada CO 80003

John Cocroft  
Project Number: 014216034  
Project: KMG - HSR 6-13X

**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 B6B0810 - EPA 5030 (soil)**

Matrix Spike (B6B0810-MS1)		Source: X602060-01			Prepared: 02/09/2016 Analyzed: 02/09/2016					
Benzene	0.098	0.002	mg/kg	0.100	ND	98.3	71.8-126			
Toluene	0.106	0.002	"	0.100	0.001	105	65.1-130			
Ethylbenzene	0.090	0.002	"	0.100	ND	90.5	62.2-130			
m,p-Xylene	0.188	0.004	"	0.200	ND	93.8	46.5-137			
o-Xylene	0.092	0.002	"	0.100	ND	92.2	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	60.6		ug/kg	62.5		97.0	70-130			
Surrogate: Toluene-d8	62.1		"	62.5		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	57.9		"	62.5		92.6	70-130			

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034  
Project: KMG - HSR 6-13X

**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 B6B0810 - EPA 5030 (soil)**

Matrix Spike Dup (B6B0810-MSD1)		Source: X602060-01			Prepared: 02/09/2016 Analyzed: 02/09/2016					
Benzene	0.103	0.002	mg/kg	0.100	ND	103	71.8-126	4.51	11.3	
Toluene	0.098	0.002	"	0.100	0.001	96.3	65.1-130	8.20	15.4	
Ethylbenzene	0.099	0.002	"	0.100	ND	98.6	62.2-130	8.63	19.6	
m,p-Xylene	0.199	0.004	"	0.200	ND	99.5	46.5-137	5.91	19.2	
o-Xylene	0.100	0.002	"	0.100	ND	100	54.2-134	8.12	17.9	
Surrogate: 1,2-Dichloroethane-d4	57.9		ug/kg	62.5		92.6	70-130			
Surrogate: Toluene-d8	60.9		"	62.5		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	62.8		"	62.5		100	70-130			

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034  
Project: KMG - HSR 6-13X

**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 B6B0904 - EPA 3580**

**Blank (B6B0904-BLK1)**

Prepared: 02/09/2016 Analyzed: 02/09/2016

Diesel (C10-C28)	ND	50	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	42		"	50.0		84.4	59-131			

**LCS (B6B0904-BS1)**

Prepared: 02/09/2016 Analyzed: 02/09/2016

Diesel (C10-C28)	760	50	mg/kg	1000		76.3	64-121			
Residual Range Organics (C28-C40)	700	200	"	1000		70.4	58-124			
Surrogate: o-Terphenyl	39		"	50.0		79.0	59-131			

**LCS Dup (B6B0904-BSD1)**

Prepared: 02/09/2016 Analyzed: 02/09/2016

Diesel (C10-C28)	770	50	mg/kg	1000		77.4	64-121	1.50	20	
Residual Range Organics (C28-C40)	720	200	"	1000		72.1	58-124	2.35	20	
Surrogate: o-Terphenyl	41		"	50.0		81.3	59-131			

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

John Cocroft  
Project Number: 014216034  
Project: KMG - HSR 6-13X

## Classical Chemistry Parameters - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B6B0906 - NO PREP</b>										
<b>Duplicate (B6B0906-DUP1)</b>		<b>Source: X602076-01</b>			Prepared: 02/09/2016 Analyzed: 02/09/2016					
pH	7.95		pH Units		7.95			0.00	25	
<b>Batch B6B0907 - NO PREP</b>										
<b>Blank (B6B0907-BLK1)</b>		Prepared: 02/09/2016 Analyzed: 02/09/2016								
Specific Conductance (EC)	0.00300		mmhos/cm							
<b>Duplicate (B6B0907-DUP1)</b>		<b>Source: X602076-01</b>			Prepared: 02/09/2016 Analyzed: 02/09/2016					
Specific Conductance (EC)	0.0430		mmhos/cm		0.0501			15.3	25	

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034  
Project: KMG - HSR 6-13X

### Notes and Definitions

U Sample is Non-Detect.

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



February 11, 2016

LT Environmental, Inc.

John Cocroft

4600 West 60th Avenue

Arvada

CO 80003

**Project Name - KMG - HSR 6-13X**

**Project Number - 014216034/WO# 890098**

Attached are your analytical results for KMG - HSR 6-13X received by Origins Laboratory, Inc. February 10, 2016. This project is associated with Origins project number X602089-01.

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: 014216034/WO# 89009847

Project: KMG - HSR 6-13X

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW02	X602089-01	Water	February 10, 2016 9:50	02/10/2016 17:07

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: X602089

Client: LTE

Client Project ID: HSR 6-13X

Checklist Completed by: Jeff Smith

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

Date/time completed: 2/10/16

Airbill #: NA

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

Cooler Number/Temperature: 1 12.4 °C 1 °C 1 °C (Describe)

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 <sup>(1)</sup> ?	<u>X</u>			
Is there ice present (document if blue ice is used)	<u>X</u>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<u>X</u>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<u>X</u>		
Were all samples received intact <sup>(1)</sup> ?	<u>X</u>			
Was adequate sample volume provided <sup>(1)</sup> ?	<u>X</u>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<u>X</u>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<u>X</u>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<u>X</u>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<u>X</u>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<u>X</u>			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<u>X</u>		
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (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 <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)		<u>X</u>		
Additional Comments (if any):				

<sup>(1)</sup>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)

2/10/16  
Date/Time Reviewed

Origins Laboratory, Inc.

Jen Pellegrini

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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**GW02**

**2/10/2016 9:50:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**X602089-01 (Water)**

**BTEX by EPA 8260C**

Benzene	603	4.0	ug/L	4	B6B0903	02/10/2016	02/10/2016
Toluene	1930	20.0	"	20	"	"	02/10/2016
Ethylbenzene	214	4.0	"	4	"	"	02/10/2016
Xylenes, total	3040	20.0	"	20	"	"	02/10/2016

Surrogate: 1,2-Dichloroethane-d4	106 %	84-121			"	"	02/10/2016
Surrogate: Toluene-d8	99.9 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	95.4 %	84-114			"	"	"

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0903 - EPA 5030B (Water)**

**Blank (B6B0903-BLK1)**

Prepared: 02/09/2016 Analyzed: 02/10/2016

Benzene	ND	1.0	ug/L							U
Toluene	ND	1.0	"							U
Ethylbenzene	ND	1.0	"							U
Xylenes, total	ND	1.0	"							U
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5	105		84-121			
Surrogate: Toluene-d8	62		"	62.5	99.6		85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5	100		84-114			

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0903 - EPA 5030B (Water)**

**Blank (B6B0903-BLK2)**

Prepared: 02/09/2016 Analyzed: 02/10/2016

Benzene	ND	1.0	ug/L							U
Toluene	ND	1.0	"							U
Ethylbenzene	ND	1.0	"							U
Xylenes, total	ND	1.0	"							U
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5	102		84-121			
Surrogate: Toluene-d8	59		"	62.5	94.0		85-115			
Surrogate: 4-Bromofluorobenzene	58		"	62.5	93.5		84-114			

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0903 - EPA 5030B (Water)**

**LCS (B6B0903-BS1)**

Prepared: 02/09/2016 Analyzed: 02/10/2016

Benzene	51.2	1.0	ug/L	50.0	102	73.3-129
Toluene	51.0	1.0	"	50.0	102	76.2-123
Ethylbenzene	51.0	1.0	"	50.0	102	73.6-130
m,p-Xylene	103	2.0	"	100	103	76.1-126
o-Xylene	51.8	1.0	"	50.0	104	76.6-124
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5	101	84-121
Surrogate: Toluene-d8	62		"	62.5	99.2	85-115
Surrogate: 4-Bromofluorobenzene	64		"	62.5	102	84-114

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0903 - EPA 5030B (Water)**

**LCS (B6B0903-BS2)**

Prepared: 02/09/2016 Analyzed: 02/10/2016

Benzene	43.0	1.0	ug/L	50.0		86.1	73.3-129
Toluene	43.5	1.0	"	50.0		86.9	76.2-123
Ethylbenzene	45.4	1.0	"	50.0		90.8	73.6-130
m,p-Xylene	90.9	2.0	"	100		90.9	76.1-126
o-Xylene	45.9	1.0	"	50.0		91.8	76.6-124
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		101	84-121
Surrogate: Toluene-d8	60		"	62.5		96.6	85-115
Surrogate: 4-Bromofluorobenzene	60		"	62.5		95.9	84-114

Origins Laboratory, Inc.



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Arvada CO 80003

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0903 - EPA 5030B (Water)**

Matrix Spike (B6B0903-MS1)		Source: X602056-03			Prepared: 02/09/2016 Analyzed: 02/10/2016					
Benzene	51.9	1.0	ug/L	50.0	1.7	100	74-130			
Toluene	51.2	1.0	"	50.0	ND	102	73-131			
Ethylbenzene	76.8	1.0	"	50.0	37.7	78.2	76-132			
m,p-Xylene	103	2.0	"	100	ND	103	69-139			
o-Xylene	50.2	1.0	"	50.0	ND	100	74-131			
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		103	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.6	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0903 - EPA 5030B (Water)**

Matrix Spike (B6B0903-MS2)		Source: X602056-04			Prepared: 02/09/2016 Analyzed: 02/10/2016					
Benzene	39.8	1.0	ug/L	50.0	3.2	73.3	74-130			QM-07
Toluene	38.9	1.0	"	50.0	ND	77.8	73-131			
Ethylbenzene	40.6	1.0	"	50.0	130	NR	76-132			QM-07
m,p-Xylene	80.5	2.0	"	100	0.4	80.0	69-139			
o-Xylene	39.2	1.0	"	50.0	ND	78.4	74-131			
Surrogate: 1,2-Dichloroethane-d4	77		"	62.5		123	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.3	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.1	84-114			

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Arvada CO 80003

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0903 - EPA 5030B (Water)**

Matrix Spike Dup (B6B0903-MSD1)		Source: X602056-03			Prepared: 02/09/2016 Analyzed: 02/10/2016					
Benzene	60.9	1.0	ug/L	50.0	1.7	118	74-130	16.0	20	
Toluene	60.6	1.0	"	50.0	ND	121	73-131	16.9	20	
Ethylbenzene	93.2	1.0	"	50.0	37.7	111	76-132	19.4	20	
m,p-Xylene	125	2.0	"	100	ND	125	69-139	19.6	20	
o-Xylene	61.0	1.0	"	50.0	ND	122	74-131	19.4	20	
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		100	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

**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 B6B0903 - EPA 5030B (Water)**

Matrix Spike Dup (B6B0903-MSD2)		Source: X602056-04			Prepared: 02/09/2016 Analyzed: 02/10/2016					
Benzene	51.0	1.0	ug/L	50.0	3.2	95.8	74-130	24.8	20	QM-07
Toluene	49.0	1.0	"	50.0	ND	98.0	73-131	23.0	20	QM-07
Ethylbenzene	88.7	1.0	"	50.0	130	NR	76-132	74.5	20	QM-07
m,p-Xylene	99.8	2.0	"	100	0.4	99.3	69-139	21.4	20	QM-07
o-Xylene	49.9	1.0	"	50.0	ND	99.8	74-131	24.0	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5		108	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.0	84-114			

Origins Laboratory, Inc.



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

John Cocroft  
Project Number: 014216034/WO# 89009847  
Project: KMG - HSR 6-13X

### Notes and Definitions

U Sample is Non-Detect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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.



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