



January 15, 2016

LT Environmental, Inc.

John Cocroft

4600 West 60th Avenue

Arvada CO 80003

Project Name - KMG - Radenmacher 14-30

Project Number - 014216020

Attached are your analytical results for KMG - Radenmacher 14-30 received by Origins Laboratory, Inc. January 14, 2016. This project is associated with Origins project number X601126-01.

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: 014216020
Project: KMG - Radenmacher 14-30

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01 @ 3'	X601126-01	Soil	January 14, 2016 13:20	01/14/2016 17:36
W01 @ 3'	X601126-02	Soil	January 14, 2016 13:30	01/14/2016 17:36
E01 @ 3'	X601126-03	Soil	January 14, 2016 13:40	01/14/2016 17:36
S01 @ 3'	X601126-04	Soil	January 14, 2016 13:50	01/14/2016 17:36
GW01	X601126-05	Water	January 14, 2016 14:05	01/14/2016 17:36

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John Cocroft
 Project Number: 014216020
 Project: KMG - Radenmacher 14-30

www.originslaboratory.com
 X601126
 page 1 of 1

ORIGINS LABORATORY, INC

Client: LTE
 Address: 4600 W 60th Ave
Arvada CO 80003
 Telephone Number: 303-433-9700
 Email Address: Jcocroft@LTEnv.com

Project Manager: John Cocroft
 Project Name: Radenmacher 14-30
 Project Number: 014216020
 Samples Collected By: RZ
Att: Sam LaRue

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis			Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air	Summa	Other	GC/MS		Top
N010 S'	1/14/16	1320	2	X				X				X		1	400 SAC
N010 S'		1330	2	X				X				X		2	400 SAC
F010 S'		1340	2	X				X				X		3	400 SAC
S010 S'		1350	2	X				X				X		4	400 SAC
Gwa		1405	3	X				X						5	A ↑ ↑ ↑ Run BTEX
														6	
														7	
														8	
														9	
														10	
Relinquished By: <u>[Signature]</u>	Date: <u>1/14/16</u>	Time: <u>1647</u>	Time: <u>1647</u>	Time: <u>1647</u>	Received By: <u>[Signature]</u>	Date: <u>1-14-16</u>	Time: <u>1647</u>	Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/>	Date: <u>1-14-16</u>	Time: <u>1647</u>	48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/>	Standard <input type="checkbox"/>			
Relinquished By: <u>[Signature]</u>	Date: <u>1-14-16</u>	Time: <u>1735</u>	Time: <u>1735</u>	Time: <u>1735</u>	Received By: <u>[Signature]</u>	Date: <u>1/14/16</u>	Time: <u>1736</u>		Date: <u>1/14/16</u>	Time: <u>1736</u>					

Temp Received: 5.9
 Date Results Needed: Friday 8 AM

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

Origins Laboratory, Inc.

Jefe Pellegrini

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 Arvada CO 80003

John Cocroft
 Project Number: 014216020
 Project: KMG - Radenmacher 14-30

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X601126 Client: LTE
 Client Project ID: Radenmacher 1430
 Checklist Completed by: Jeff Smith Shipped Via: HRD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Date/time completed: 1/14/16 Airbill #: NA
 Matrix(s) Received: (Check all that apply): Soil/Solid _____ Water _____ Other: _____
 Cooler Number/Temperature: 1 / 5.8 °C _____ °C _____ °C _____ °C (Describe)
 Thermometer ID: 1003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ^{(1)?}	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		Y		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		Y		
Were all samples received intact ^{(1)?}	Y			
Was adequate sample volume provided ^{(1)?}	Y			
Are short holding time analytes or samples with HTs due within 48 hours present ^{(1)?}	X			PH
Is a chain-of-custody (COC) present and filled out completely ^{(1)?}	X			
Does the COC agree with the number and type of sample bottles received ^{(1)?}	Y			
Do the sample IDs on the bottle labels match the COC ^{(1)?}	Y			
Is the COC properly relinquished by the client with date and time recorded ^{(1)?}	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	
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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			X	
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) 1/14/16 Date/Time Reviewed

Origins Laboratory, Inc.



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

John Cocroft
 Project Number: 014216020
 Project: KMG - Radenmacher 14-30

N01 @ 3'
1/14/2016 1:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X601126-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25	mg/kg	1	B6A1402	01/14/2016	01/14/2016	
Residual Range Organics (C28-C36)	ND	100	"	"	"	"	"	

Surrogate: o-Terphenyl 75.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6A1407	01/14/2016	01/14/2016	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 112 % 70-130 " " "
Surrogate: Toluene-d8 98.9 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 96.3 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.01		pH Units	1	B6A1405	01/14/2016	01/14/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.385		mmhos/cm	"	B6A1406	01/14/2016	01/14/2016	
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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: 014216020
 Project: KMG - Radenmacher 14-30

W01 @ 3'
1/14/2016 1:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X601126-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25	mg/kg	1	B6A1402	01/14/2016	01/15/2016	
Residual Range Organics (C28-C36)	ND	100	"	"	"	"	"	

Surrogate: o-Terphenyl 77.3 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6A1407	01/14/2016	01/14/2016	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 107 % 70-130 " " "
Surrogate: Toluene-d8 94.3 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 98.5 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.04		pH Units	1	B6A1405	01/14/2016	01/14/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.383		mmhos/cm	"	B6A1406	01/14/2016	01/14/2016	
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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: 014216020
 Project: KMG - Radenmacher 14-30

E01 @ 3'
1/14/2016 1:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X601126-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25	mg/kg	1	B6A1402	01/14/2016	01/14/2016	
Residual Range Organics (C28-C36)	ND	100	"	"	"	"	"	

Surrogate: o-Terphenyl 69.8 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6A1407	01/14/2016	01/14/2016	
Benzene	0.002	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 111 % 70-130 " " "
Surrogate: Toluene-d8 96.0 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 97.8 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.94		pH Units	1	B6A1405	01/14/2016	01/14/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.361		mmhos/cm	"	B6A1406	01/14/2016	01/14/2016	
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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: 014216020
 Project: KMG - Radenmacher 14-30

S01 @ 3'
1/14/2016 1:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X601126-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25	mg/kg	1	B6A1402	01/14/2016	01/14/2016	
Residual Range Organics (C28-C36)	ND	100	"	"	"	"	"	

Surrogate: o-Terphenyl 71.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	85.4	5.00	mg/kg	25	B6A1407	01/14/2016	01/15/2016	
Benzene	0.223	0.050	"	"	"	"	"	
Toluene	0.368	0.050	"	"	"	"	"	
Ethylbenzene	0.220	0.050	"	"	"	"	"	
Xylenes, total	2.10	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 101 % 70-130 " " "
Surrogate: Toluene-d8 102 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 98.1 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.04		pH Units	1	B6A1405	01/14/2016	01/14/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.256		mmhos/cm	"	B6A1406	01/14/2016	01/14/2016	
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 Project Number: 014216020
 Project: KMG - Radenmacher 14-30

GW01
1/14/2016 2:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X601126-05 (Water)

BTEX by EPA 8260C

Benzene	87.1	1.0	ug/L	1	B6A1304	01/14/2016	01/14/2016	
Toluene	2.0	1.0	"	"	"	"	"	
Ethylbenzene	25.7	1.0	"	"	"	"	"	
Xylenes, total	233	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	98.9 %	84-121			"	"	"	
Surrogate: Toluene-d8	105 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.1 %	84-114			"	"	"	

Origins Laboratory, Inc.



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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 B6A1304 - EPA 5030B (Water)

Blank (B6A1304-BLK1)

Prepared: 01/13/2016 Analyzed: 01/14/2016

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	65		"	62.5		104	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

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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 B6A1304 - EPA 5030B (Water)

Blank (B6A1304-BLK2)

Prepared: 01/13/2016 Analyzed: 01/14/2016

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	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.6	84-114			

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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 B6A1304 - EPA 5030B (Water)

LCS (B6A1304-BS1)

Prepared: 01/13/2016 Analyzed: 01/14/2016

Benzene	51.7	1.0	ug/L	50.0		103	73.3-129			
Toluene	50.7	1.0	"	50.0		101	76.2-123			
Ethylbenzene	52.9	1.0	"	50.0		106	73.6-130			
m,p-Xylene	104	2.0	"	100		104	76.1-126			
o-Xylene	51.2	1.0	"	50.0		102	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.9	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.6	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.1	84-114			

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 Arvada CO 80003

John Cocroft
 Project Number: 014216020
 Project: KMG - Radenmacher 14-30

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 B6A1304 - EPA 5030B (Water)

LCS (B6A1304-BS2)

Prepared: 01/13/2016 Analyzed: 01/14/2016

Benzene	42.4	1.0	ug/L	50.0		84.9	73.3-129			
Toluene	43.8	1.0	"	50.0		87.7	76.2-123			
Ethylbenzene	45.9	1.0	"	50.0		91.7	73.6-130			
m,p-Xylene	91.3	2.0	"	100		91.3	76.1-126			
o-Xylene	45.8	1.0	"	50.0		91.7	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		95.0	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.1	84-114			

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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 B6A1304 - EPA 5030B (Water)

Matrix Spike (B6A1304-MS1)	Source: X601113-08			Prepared: 01/13/2016 Analyzed: 01/14/2016						
Benzene	55.0	1.0	ug/L	50.0	0.9	108	74-130			
Toluene	53.4	1.0	"	50.0	ND	107	73-131			
Ethylbenzene	53.3	1.0	"	50.0	ND	107	76-132			
m,p-Xylene	105	2.0	"	100	ND	105	69-139			
o-Xylene	50.9	1.0	"	50.0	ND	102	74-131			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		100	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	84-114			

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 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: 014216020
 Project: KMG - Radenmacher 14-30

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 B6A1304 - EPA 5030B (Water)

Matrix Spike (B6A1304-MS2)	Source: X601113-20			Prepared: 01/13/2016 Analyzed: 01/14/2016						
Benzene	54.3	1.0	ug/L	50.0	ND	109	74-130			
Toluene	53.4	1.0	"	50.0	ND	107	73-131			
Ethylbenzene	55.4	1.0	"	50.0	ND	111	76-132			
m,p-Xylene	108	2.0	"	100	ND	108	69-139			
o-Xylene	53.0	1.0	"	50.0	ND	106	74-131			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	84-121			
Surrogate: Toluene-d8	61		"	62.5		98.2	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.4	84-114			

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 Project: KMG - Radenmacher 14-30

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 B6A1304 - EPA 5030B (Water)

Matrix Spike Dup (B6A1304-MSD1)	Source: X601113-08			Prepared: 01/13/2016 Analyzed: 01/14/2016						
Benzene	56.2	1.0	ug/L	50.0	0.9	111	74-130	2.18	20	
Toluene	54.0	1.0	"	50.0	ND	108	73-131	1.15	20	
Ethylbenzene	54.1	1.0	"	50.0	ND	108	76-132	1.53	20	
m,p-Xylene	107	2.0	"	100	ND	107	69-139	2.01	20	
o-Xylene	52.2	1.0	"	50.0	ND	104	74-131	2.60	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.2	84-121			
Surrogate: Toluene-d8	62		"	62.5		98.7	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.8	84-114			

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John Cocroft
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 Project: KMG - Radenmacher 14-30

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 B6A1304 - EPA 5030B (Water)

Matrix Spike Dup (B6A1304-MSD2)	Source: X601113-20			Prepared: 01/13/2016 Analyzed: 01/14/2016						
Benzene	48.2	1.0	ug/L	50.0	ND	96.4	74-130	12.0	20	
Toluene	47.4	1.0	"	50.0	ND	94.8	73-131	11.8	20	
Ethylbenzene	49.0	1.0	"	50.0	ND	97.9	76-132	12.4	20	
m,p-Xylene	95.2	2.0	"	100	ND	95.2	69-139	12.3	20	
o-Xylene	46.6	1.0	"	50.0	ND	93.2	74-131	13.0	20	
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		105	84-121			
Surrogate: Toluene-d8	62		"	62.5		98.9	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.3	84-114			

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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 B6A1407 - EPA 5030 (soil)

Blank (B6A1407-BLK1)

Prepared: 01/14/2016 Analyzed: 01/14/2016

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	72.9		ug/kg	62.5		117	70-130			
Surrogate: Toluene-d8	58.8		"	62.5		94.1	70-130			
Surrogate: 4-Bromofluorobenzene	60.7		"	62.5		97.1	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6A1407 - EPA 5030 (soil)

Blank (B6A1407-BLK2)

Prepared: 01/14/2016 Analyzed: 01/14/2016

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	64.0		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	62.0		"	62.5		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	57.2		"	62.5		91.5	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6A1407 - EPA 5030 (soil)

Blank (B6A1407-BLK3)

Prepared: 01/14/2016 Analyzed: 01/14/2016

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	61.3		ug/kg	62.5		98.0	70-130			
Surrogate: Toluene-d8	60.7		"	62.5		97.1	70-130			
Surrogate: 4-Bromofluorobenzene	55.2		"	62.5		88.3	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6A1407 - EPA 5030 (soil)

LCS (B6A1407-BS1)

Prepared: 01/14/2016 Analyzed: 01/14/2016

Benzene	0.091	0.002	mg/kg	0.100		91.2	77.1-124			
Toluene	0.093	0.002	"	0.100		92.9	74.5-128			
Ethylbenzene	0.100	0.002	"	0.100		100	66.4-127			
m,p-Xylene	0.195	0.004	"	0.200		97.7	76.6-124			
o-Xylene	0.096	0.002	"	0.100		96.1	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	71.1		ug/kg	62.5		114	70-130			
Surrogate: Toluene-d8	60.1		"	62.5		96.2	70-130			
Surrogate: 4-Bromofluorobenzene	61.9		"	62.5		99.1	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6A1407 - EPA 5030 (soil)

LCS (B6A1407-BS2)

Prepared: 01/14/2016 Analyzed: 01/14/2016

Benzene	0.097	0.002	mg/kg	0.100		96.9	77.1-124			
Toluene	0.098	0.002	"	0.100		97.8	74.5-128			
Ethylbenzene	0.088	0.002	"	0.100		87.8	66.4-127			
m,p-Xylene	0.177	0.004	"	0.200		88.5	76.6-124			
o-Xylene	0.087	0.002	"	0.100		87.5	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	66.8		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	62.4		"	62.5		99.9	70-130			
Surrogate: 4-Bromofluorobenzene	55.0		"	62.5		88.0	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6A1407 - EPA 5030 (soil)

LCS (B6A1407-BS3)

Prepared: 01/14/2016 Analyzed: 01/14/2016

Benzene	0.103	0.002	mg/kg	0.100		103	77.1-124			
Toluene	0.105	0.002	"	0.100		105	74.5-128			
Ethylbenzene	0.093	0.002	"	0.100		93.0	66.4-127			
m,p-Xylene	0.186	0.004	"	0.200		93.2	76.6-124			
o-Xylene	0.092	0.002	"	0.100		92.4	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	63.9		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	63.9		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	53.8		"	62.5		86.1	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6A1407 - EPA 5030 (soil)

Matrix Spike (B6A1407-MS1)	Source: X601125-01			Prepared: 01/14/2016 Analyzed: 01/14/2016						
Benzene	0.090	0.002	mg/kg	0.100	ND	89.9	71.8-126			
Toluene	0.095	0.002	"	0.100	ND	95.1	65.1-130			
Ethylbenzene	0.102	0.002	"	0.100	ND	102	62.2-130			
m,p-Xylene	0.205	0.004	"	0.200	0.0009	102	46.5-137			
o-Xylene	0.101	0.002	"	0.100	0.0005	101	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	68.9		ug/kg	62.5		110	70-130			
Surrogate: Toluene-d8	61.7		"	62.5		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	60.7		"	62.5		97.1	70-130			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6A1407 - EPA 5030 (soil)

Matrix Spike (B6A1407-MS2)	Source: X601125-02			Prepared: 01/14/2016 Analyzed: 01/14/2016						
Benzene	0.087	0.002	mg/kg	0.100	ND	86.8	71.8-126			
Toluene	0.089	0.002	"	0.100	ND	88.9	65.1-130			
Ethylbenzene	0.098	0.002	"	0.100	ND	98.4	62.2-130			
m,p-Xylene	0.191	0.004	"	0.200	ND	95.3	46.5-137			
o-Xylene	0.095	0.002	"	0.100	ND	95.1	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	69.1		ug/kg	62.5		111	70-130			
Surrogate: Toluene-d8	60.0		"	62.5		96.0	70-130			
Surrogate: 4-Bromofluorobenzene	60.3		"	62.5		96.4	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6A1407 - EPA 5030 (soil)

Matrix Spike (B6A1407-MS3)	Source: X601125-03			Prepared: 01/14/2016 Analyzed: 01/14/2016						
Benzene	0.088	0.002	mg/kg	0.100	ND	87.6	71.8-126			
Toluene	0.091	0.002	"	0.100	ND	91.2	65.1-130			
Ethylbenzene	0.104	0.002	"	0.100	ND	104	62.2-130			
m,p-Xylene	0.206	0.004	"	0.200	ND	103	46.5-137			
o-Xylene	0.101	0.002	"	0.100	ND	101	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	66.0		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	58.0		"	62.5		92.8	70-130			
Surrogate: 4-Bromofluorobenzene	59.9		"	62.5		95.9	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6A1407 - EPA 5030 (soil)

Matrix Spike Dup (B6A1407-MSD1)	Source: X601125-01			Prepared: 01/14/2016 Analyzed: 01/14/2016						
Benzene	0.090	0.002	mg/kg	0.100	ND	90.0	71.8-126	0.178	11.3	
Toluene	0.093	0.002	"	0.100	ND	92.7	65.1-130	2.53	15.4	
Ethylbenzene	0.110	0.002	"	0.100	ND	110	62.2-130	7.40	19.6	
m,p-Xylene	0.216	0.004	"	0.200	0.0009	107	46.5-137	5.16	19.2	
o-Xylene	0.108	0.002	"	0.100	0.0005	107	54.2-134	6.25	17.9	
Surrogate: 1,2-Dichloroethane-d4	66.9		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	59.2		"	62.5		94.7	70-130			
Surrogate: 4-Bromofluorobenzene	63.1		"	62.5		101	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6A1407 - EPA 5030 (soil)

Matrix Spike Dup (B6A1407-MSD2)	Source: X601125-02			Prepared: 01/14/2016 Analyzed: 01/14/2016						
Benzene	0.090	0.002	mg/kg	0.100	ND	89.7	71.8-126	3.33	11.3	
Toluene	0.092	0.002	"	0.100	ND	91.8	65.1-130	3.19	15.4	
Ethylbenzene	0.103	0.002	"	0.100	ND	103	62.2-130	4.49	19.6	
m,p-Xylene	0.197	0.004	"	0.200	ND	98.5	46.5-137	3.29	19.2	
o-Xylene	0.099	0.002	"	0.100	ND	99.1	54.2-134	4.12	17.9	
Surrogate: 1,2-Dichloroethane-d4	70.1		ug/kg	62.5		112	70-130			
Surrogate: Toluene-d8	59.0		"	62.5		94.4	70-130			
Surrogate: 4-Bromofluorobenzene	61.0		"	62.5		97.6	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B6A1407 - EPA 5030 (soil)

Matrix Spike Dup (B6A1407-MSD3)	Source: X601125-03			Prepared: 01/14/2016 Analyzed: 01/14/2016						
Benzene	0.089	0.002	mg/kg	0.100	ND	88.9	71.8-126	1.52	11.3	
Toluene	0.095	0.002	"	0.100	ND	94.8	65.1-130	3.81	15.4	
Ethylbenzene	0.105	0.002	"	0.100	ND	105	62.2-130	0.517	19.6	
m,p-Xylene	0.205	0.004	"	0.200	ND	102	46.5-137	0.866	19.2	
o-Xylene	0.102	0.002	"	0.100	ND	102	54.2-134	1.30	17.9	
Surrogate: 1,2-Dichloroethane-d4	67.8		ug/kg	62.5		108	70-130			
Surrogate: Toluene-d8	59.9		"	62.5		95.9	70-130			
Surrogate: 4-Bromofluorobenzene	61.2		"	62.5		97.9	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Extractable Petroleum Hydrocarbons by 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 B6A1402 - EPA 3580

Blank (B6A1402-BLK1)

Prepared: 01/14/2016 Analyzed: 01/14/2016

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	35		"	50.0		70.0	59-131			

Blank (B6A1402-BLK2)

Prepared: 01/14/2016 Analyzed: 01/14/2016

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	44		"	50.0		87.7	59-131			

Blank (B6A1402-BLK3)

Prepared: 01/14/2016 Analyzed: 01/14/2016

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	42		"	50.0		84.8	59-131			

LCS (B6A1402-BS1)

Prepared: 01/14/2016 Analyzed: 01/14/2016

Diesel (C10-C28)	880	50	mg/kg	1000		88.5	64-121			
Residual Range Organics (C28-C36)	940	200	"	1000		93.7	58-124			
Surrogate: o-Terphenyl	42		"	50.0		83.6	59-131			

LCS (B6A1402-BS2)

Prepared: 01/14/2016 Analyzed: 01/14/2016

Diesel (C10-C28)	830	50	mg/kg	1000		83.1	64-121			
Residual Range Organics (C28-C36)	850	200	"	1000		84.8	58-124			

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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
Batch B6A1402 - EPA 3580										
LCS (B6A1402-BS2)					Prepared: 01/14/2016 Analyzed: 01/14/2016					
Surrogate: o-Terphenyl	42		mg/kg	50.0		84.2	59-131			
LCS (B6A1402-BS3)					Prepared: 01/14/2016 Analyzed: 01/14/2016					
Diesel (C10-C28)	940	50	mg/kg	1000		93.6	64-121			
Residual Range Organics (C28-C36)	1000	200	"	1000		102	58-124			
Surrogate: o-Terphenyl	44		"	50.0		88.2	59-131			
LCS Dup (B6A1402-BSD1)					Prepared: 01/14/2016 Analyzed: 01/14/2016					
Diesel (C10-C28)	820	50	mg/kg	1000		82.1	64-121	7.52	20	
Residual Range Organics (C28-C36)	870	200	"	1000		86.9	58-124	7.47	20	
Surrogate: o-Terphenyl	41		"	50.0		81.7	59-131			
LCS Dup (B6A1402-BSD2)					Prepared: 01/14/2016 Analyzed: 01/14/2016					
Diesel (C10-C28)	730	50	mg/kg	1000		73.1	64-121	12.7	20	
Residual Range Organics (C28-C36)	740	200	"	1000		73.6	58-124	14.2	20	
Surrogate: o-Terphenyl	38		"	50.0		76.4	59-131			
LCS Dup (B6A1402-BSD3)					Prepared: 01/14/2016 Analyzed: 01/14/2016					
Diesel (C10-C28)	880	50	mg/kg	1000		87.5	64-121	6.76	20	
Residual Range Organics (C28-C36)	930	200	"	1000		93.3	58-124	8.52	20	
Surrogate: o-Terphenyl	49		"	50.0		98.4	59-131			

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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: 014216020
 Project: KMG - Radenmacher 14-30

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 B6A1405 - NO PREP										
Duplicate (B6A1405-DUP1)		Source: X601125-01			Prepared: 01/14/2016 Analyzed: 01/14/2016					
pH	7.85		pH Units		7.88			0.381	25	
Duplicate (B6A1405-DUP2)		Source: X601125-02			Prepared: 01/14/2016 Analyzed: 01/14/2016					
pH	7.98		pH Units		7.94			0.503	25	
Duplicate (B6A1405-DUP3)		Source: X601125-03			Prepared: 01/14/2016 Analyzed: 01/14/2016					
pH	8.39		pH Units		8.44			0.594	25	
Batch B6A1406 - NO PREP										
Blank (B6A1406-BLK1)					Prepared: 01/14/2016 Analyzed: 01/14/2016					
Specific Conductance (EC)	0.00270		mmhos/cm							
Blank (B6A1406-BLK2)					Prepared: 01/14/2016 Analyzed: 01/14/2016					
Specific Conductance (EC)	0.00240		mmhos/cm							
Blank (B6A1406-BLK3)					Prepared: 01/14/2016 Analyzed: 01/14/2016					
Specific Conductance (EC)	0.00270		mmhos/cm							
Duplicate (B6A1406-DUP1)		Source: X601125-01			Prepared: 01/14/2016 Analyzed: 01/14/2016					
Specific Conductance (EC)	0.168		mmhos/cm		0.164			2.77	25	
Duplicate (B6A1406-DUP2)		Source: X601125-02			Prepared: 01/14/2016 Analyzed: 01/14/2016					
Specific Conductance (EC)	0.435		mmhos/cm		0.427			1.86	25	
Duplicate (B6A1406-DUP3)		Source: X601125-03			Prepared: 01/14/2016 Analyzed: 01/14/2016					
Specific Conductance (EC)	0.111		mmhos/cm		0.114			3.01	25	

Origins Laboratory, Inc.



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

John Cocroft
Project Number: 014216020
Project: KMG - Radenmacher 14-30

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



January 22, 2016

LT Environmental, Inc.

John Cocroft

4600 West 60th Avenue

Arvada CO 80003

Project Name - KMG - Radenmacher 14-30

Project Number - 014216020

Attached are your analytical results for KMG - Radenmacher 14-30 received by Origins Laboratory, Inc. January 21, 2016. This project is associated with Origins project number X601205-01.

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: 014216020
Project: KMG - Radenmacher 14-30

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W02 @ 3'	X601205-01	Soil	January 21, 2016 15:30	01/21/2016 18:30
W03 @ 3'	X601205-02	Soil	January 21, 2016 15:35	01/21/2016 18:30
E02 @ 3'	X601205-03	Soil	January 21, 2016 15:40	01/21/2016 18:30
E03 @ 3'	X601205-04	Soil	January 21, 2016 15:45	01/21/2016 18:30
S02 @ 3'	X601205-05	Soil	January 21, 2016 15:50	01/21/2016 18:30

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: 014216020
 Project: KMG - Radenmacher 14-30

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X601205 Client: LTE
 Client Project ID: Radenmacher 14-30
 Checklist Completed by: Jeff Smith Shipped Via: H/D
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Date/time completed: 1/21/16 Airbill #: NA
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1 / 2.0 °C 1 / _____ °C 1 / _____ °C 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)?}	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ^{(1)?}	X			
Was adequate sample volume provided ^{(1)?}	X			
Are short holding time analytes or samples with HTs due within 48 hours present ^{(1)?}	X			PH
Is a chain-of-custody (COC) present and filled out completely ^{(1)?}	X			
Does the COC agree with the number and type of sample bottles received ^{(1)?}	X			
Do the sample IDs on the bottle labels match the COC ^{(1)?}	X			
Is the COC properly relinquished by the client with date and time recorded ^{(1)?}	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	
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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			X	
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.

[Signature] Reviewed by (Project Manager) 1/21/16 Date/Time Reviewed

Origins Laboratory, Inc.

Jefe 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: 014216020
 Project: KMG - Radenmacher 14-30

W02 @ 3'
1/21/2016 3:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X601205-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	45	25	mg/kg	1	B6A2108	01/21/2016	01/22/2016	
Residual Range Organics (C28-C36)	ND	100	"	"	"	"	"	

Surrogate: *o*-Terphenyl 89.3 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6A2109	01/21/2016	01/21/2016	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " "
 Surrogate: Toluene-d8 91.0 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 94.0 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.16		pH Units	1	B6A2106	01/21/2016	01/21/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.324		mmhos/cm	"	B6A2107	01/21/2016	01/21/2016	
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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: 014216020
 Project: KMG - Radenmacher 14-30

W03 @ 3'
1/21/2016 3:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X601205-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25	mg/kg	1	B6A2108	01/21/2016	01/22/2016	
Residual Range Organics (C28-C36)	ND	100	"	"	"	"	"	

Surrogate: o-Terphenyl 58.2 % 59-131 " " " S-04

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6A2109	01/21/2016	01/21/2016	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 109 % 70-130 " " "

Surrogate: Toluene-d8 93.7 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 94.3 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.37		pH Units	1	B6A2106	01/21/2016	01/21/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.197		mmhos/cm	"	B6A2107	01/21/2016	01/21/2016	
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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: 014216020
 Project: KMG - Radenmacher 14-30

E02 @ 3'
1/21/2016 3:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X601205-03 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25	mg/kg	1	B6A2108	01/21/2016	01/22/2016	
Residual Range Organics (C28-C36)	ND	100	"	"	"	"	"	

Surrogate: *o*-Terphenyl 57.5 % 59-131 " " " S-04

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6A2109	01/21/2016	01/21/2016	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 106 % 70-130 " " "

Surrogate: Toluene-d8 94.1 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.13		pH Units	1	B6A2106	01/21/2016	01/21/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.171		mmhos/cm	"	B6A2107	01/21/2016	01/21/2016	
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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: 014216020
 Project: KMG - Radenmacher 14-30

E03 @ 3'
1/21/2016 3:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X601205-04 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25	mg/kg	1	B6A2108	01/21/2016	01/22/2016	
Residual Range Organics (C28-C36)	ND	100	"	"	"	"	"	

Surrogate: o-Terphenyl 62.9 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6A2109	01/21/2016	01/21/2016	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 112 % 70-130 " " "
Surrogate: Toluene-d8 92.0 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 96.8 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.94		pH Units	1	B6A2106	01/21/2016	01/21/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.145		mmhos/cm	"	B6A2107	01/21/2016	01/21/2016	
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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: 014216020
 Project: KMG - Radenmacher 14-30

S02 @ 3'
1/21/2016 3:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X601205-05 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	25	mg/kg	1	B6A2108	01/21/2016	01/22/2016	
Residual Range Organics (C28-C36)	ND	100	"	"	"	"	"	

Surrogate: o-Terphenyl 64.5 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B6A2109	01/21/2016	01/21/2016	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 110 % 70-130 " " "
Surrogate: Toluene-d8 94.0 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 86.6 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.79		pH Units	1	B6A2106	01/21/2016	01/21/2016	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.267		mmhos/cm	"	B6A2107	01/21/2016	01/21/2016	
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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: 014216020
 Project: KMG - Radenmacher 14-30

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 B6A2109 - EPA 5030 (soil)

Blank (B6A2109-BLK1)

Prepared: 01/21/2016 Analyzed: 01/21/2016

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	63.1		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	58.6		"	62.5		93.8	70-130			
Surrogate: 4-Bromofluorobenzene	60.0		"	62.5		96.0	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: 014216020
 Project: KMG - Radenmacher 14-30

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 B6A2109 - EPA 5030 (soil)

Blank (B6A2109-BLK2)

Prepared: 01/21/2016 Analyzed: 01/21/2016

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	66.8		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	58.8		"	62.5		94.2	70-130			
Surrogate: 4-Bromofluorobenzene	58.6		"	62.5		93.8	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: 014216020
 Project: KMG - Radenmacher 14-30

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 B6A2109 - EPA 5030 (soil)

LCS (B6A2109-BS1)

Prepared: 01/21/2016 Analyzed: 01/21/2016

Benzene	0.082	0.002	mg/kg	0.100		81.6	77.1-124			
Toluene	0.088	0.002	"	0.100		87.6	74.5-128			
Ethylbenzene	0.112	0.002	"	0.100		112	66.4-127			
m,p-Xylene	0.221	0.004	"	0.200		110	76.6-124			
o-Xylene	0.109	0.002	"	0.100		109	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	60.2		ug/kg	62.5		96.3	70-130			
Surrogate: Toluene-d8	54.0		"	62.5		86.5	70-130			
Surrogate: 4-Bromofluorobenzene	61.4		"	62.5		98.3	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: 014216020
 Project: KMG - Radenmacher 14-30

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 B6A2109 - EPA 5030 (soil)

LCS (B6A2109-BS2)

Prepared: 01/21/2016 Analyzed: 01/22/2016

Benzene	0.084	0.002	mg/kg	0.100		84.5	77.1-124			
Toluene	0.095	0.002	"	0.100		94.8	74.5-128			
Ethylbenzene	0.116	0.002	"	0.100		116	66.4-127			
m,p-Xylene	0.225	0.004	"	0.200		112	76.6-124			
o-Xylene	0.114	0.002	"	0.100		114	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	63.1		ug/kg	62.5		101	70-130			
Surrogate: Toluene-d8	55.9		"	62.5		89.4	70-130			
Surrogate: 4-Bromofluorobenzene	61.3		"	62.5		98.1	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: 014216020
 Project: KMG - Radenmacher 14-30

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 B6A2109 - EPA 5030 (soil)

LCS Dup (B6A2109-BSD1)

Prepared: 01/21/2016 Analyzed: 01/22/2016

Benzene	0.101	0.002	mg/kg	0.100		101	77.1-124	21.6	20	QR-02
Toluene	0.100	0.002	"	0.100		99.6	74.5-128	12.8	20	
Ethylbenzene	0.092	0.002	"	0.100		92.2	66.4-127	19.4	20	
m,p-Xylene	0.193	0.004	"	0.200		96.6	76.6-124	13.3	20	
o-Xylene	0.098	0.002	"	0.100		97.7	76.6-124	11.0	20	
Surrogate: 1,2-Dichloroethane-d4	63.4		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	62.0		"	62.5		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	56.7		"	62.5		90.7	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: 014216020
 Project: KMG - Radenmacher 14-30

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 B6A2109 - EPA 5030 (soil)

LCS Dup (B6A2109-BSD2)

Prepared: 01/21/2016 Analyzed: 01/22/2016

Benzene	0.103	0.002	mg/kg	0.100		103	77.1-124	19.7	20	
Toluene	0.102	0.002	"	0.100		102	74.5-128	7.37	20	
Ethylbenzene	0.096	0.002	"	0.100		95.8	66.4-127	19.0	20	
m,p-Xylene	0.200	0.004	"	0.200		100	76.6-124	11.5	20	
o-Xylene	0.101	0.002	"	0.100		101	76.6-124	11.6	20	
Surrogate: 1,2-Dichloroethane-d4	60.8		ug/kg	62.5		97.2	70-130			
Surrogate: Toluene-d8	62.4		"	62.5		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	58.5		"	62.5		93.6	70-130			

Origins Laboratory, Inc.



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

John Cocroft
 Project Number: 014216020
 Project: KMG - Radenmacher 14-30

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 B6A2108 - EPA 3580

Blank (B6A2108-BLK1)

Prepared: 01/21/2016 Analyzed: 01/21/2016

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	41		"	50.0		82.4	59-131			

Blank (B6A2108-BLK2)

Prepared: 01/21/2016 Analyzed: 01/21/2016

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	40		"	50.0		79.4	59-131			

LCS (B6A2108-BS1)

Prepared: 01/21/2016 Analyzed: 01/21/2016

Diesel (C10-C28)	920	50	mg/kg				64-121			
Residual Range Organics (C28-C36)	930	200	"				58-124			
Surrogate: o-Terphenyl	48		"	50.0		96.3	59-131			

LCS (B6A2108-BS2)

Prepared: 01/21/2016 Analyzed: 01/21/2016

Diesel (C10-C28)	760	50	mg/kg				64-121			
Residual Range Organics (C28-C36)	730	200	"				58-124			
Surrogate: o-Terphenyl	41		"	50.0		81.1	59-131			

Matrix Spike (B6A2108-MS1)

Source: X601205-01

Prepared: 01/21/2016 Analyzed: 01/21/2016

Diesel (C10-C28)	800	50	mg/kg		45		53-125			
Residual Range Organics (C28-C36)	760	200	"		17		47-133			

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LT Environmental, Inc.
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John Cocroft
 Project Number: 014216020
 Project: KMG - Radenmacher 14-30

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 B6A2108 - EPA 3580										
Matrix Spike (B6A2108-MS1)		Source: X601205-01			Prepared: 01/21/2016 Analyzed: 01/21/2016					
Surrogate: o-Terphenyl	40		mg/kg	50.0		80.3	59-131			
Matrix Spike (B6A2108-MS2)		Source: X601205-02			Prepared: 01/21/2016 Analyzed: 01/21/2016					
Diesel (C10-C28)	760	50	mg/kg		16		53-125			
Residual Range Organics (C28-C36)	740	200	"		16		47-133			
Surrogate: o-Terphenyl	39		"	50.0		77.8	59-131			
Matrix Spike Dup (B6A2108-MSD1)		Source: X601205-01			Prepared: 01/21/2016 Analyzed: 01/21/2016					
Diesel (C10-C28)	800	50	mg/kg		45		53-125	0.00714	20	
Residual Range Organics (C28-C36)	740	200	"		17		47-133	1.88	20	
Surrogate: o-Terphenyl	41		"	50.0		81.3	59-131			
Matrix Spike Dup (B6A2108-MSD2)		Source: X601205-02			Prepared: 01/21/2016 Analyzed: 01/21/2016					
Diesel (C10-C28)	720	50	mg/kg		16		53-125	5.43	20	
Residual Range Organics (C28-C36)	680	200	"		16		47-133	7.69	20	
Surrogate: o-Terphenyl	38		"	50.0		75.4	59-131			

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LT Environmental, Inc.
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John Cocroft
 Project Number: 014216020
 Project: KMG - Radenmacher 14-30

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 B6A2106 - NO PREP										
Duplicate (B6A2106-DUP1)		Source: X601202-01			Prepared: 01/21/2016 Analyzed: 01/21/2016					
pH	8.48		pH Units		8.29			2.27	25	
Batch B6A2107 - NO PREP										
Blank (B6A2107-BLK1)		Prepared: 01/21/2016 Analyzed: 01/21/2016								
Specific Conductance (EC)	0.00270		mmhos/cm							
Duplicate (B6A2107-DUP1)		Source: X601202-01			Prepared: 01/21/2016 Analyzed: 01/21/2016					
Specific Conductance (EC)	0.0483		mmhos/cm		0.0506			4.65	25	

Origins Laboratory, Inc.



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Project: KMG - Radenmacher 14-30

Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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