



March 18, 2015

LT Environmental, Inc.

John Cocroft

4600 West 60th Avenue

Arvada CO 80003

Project Name - KMG - Burkhardt 34N-3HZ

Project Number - [none]

Attached are your analytical results for KMG - Burkhardt 34N-3HZ received by Origins Laboratory, Inc. March 17, 2015. This project is associated with Origins project number X503200-01.

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: [none]
Project: KMG - Burkhardt 34N-3HZ

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01	X503200-01	Soil	March 17, 2015 14:30	03/17/2015 16:40
SS02	X503200-02	Soil	March 17, 2015 14:35	03/17/2015 16:40
SS03	X503200-03	Soil	March 17, 2015 14:40	03/17/2015 16:40
SS04	X503200-04	Soil	March 17, 2015 14:45	03/17/2015 16:40

Origins Laboratory, Inc.



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

John Cocroft
 Project Number: [none]
 Project: KMG - Burkhardt 34N-3HZ

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X503200

Client: LTE
 Client Project ID: Burkhardt 34N-3HZ

Checklist Completed by: Jeff Smith

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

Date/time completed: 3/17/15

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 5.7 °C 1 °C 1 °C (Describe) 1 °C

Thermometer ID: 5652

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input checked="" type="checkbox"/>			<u>PH</u>
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
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)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Jeff Smith
 Reviewed by (Project Manager)

3/17/15
 Date/Time Reviewed

Origins Laboratory, Inc.



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

John Cocroft
 Project Number: [none]
 Project: KMG - Burkhardt 34N-3HZ

SS01

3/17/2015 2:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X503200-01 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.002	mg/kg	1	5C16006	03/17/2015	03/17/2015	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"	
Surrogate: Toluene-d8	91.9 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.62		pH Units	1	5C16008	03/16/2015	03/17/2015	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.191		mmhos/cm	"	5C16009	"	03/17/2015	
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TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	50	mg/kg	1	5C17005	03/17/2015	03/17/2015	
Diesel (C10-C28)	ND	50	"	"	"	"	"	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl	72.7 %	65-146			"	"	"	
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Origins Laboratory, Inc.



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LT Environmental, Inc.
 4600 West 60th Avenue
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John Cocroft
 Project Number: [none]
 Project: KMG - Burkhardt 34N-3HZ

SS02

3/17/2015 2:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X503200-02 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.002	mg/kg	1	5C16006	03/17/2015	03/17/2015	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	100 %	70-130			"	"	"	
Surrogate: Toluene-d8	104 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	95.7 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.54		pH Units	1	5C16008	03/16/2015	03/17/2015	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.255		mmhos/cm	"	5C16009	"	03/17/2015	
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TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	50	mg/kg	1	5C17005	03/17/2015	03/17/2015	
Diesel (C10-C28)	ND	50	"	"	"	"	"	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl	70.8 %	65-146			"	"	"	
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Origins Laboratory, Inc.



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LT Environmental, Inc.
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 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Burkhardt 34N-3HZ

SS03

3/17/2015 2:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X503200-03 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.100	mg/kg	50	5C16006	03/17/2015	03/17/2015	
Toluene	ND	0.100	"	"	"	"	"	
Ethylbenzene	ND	0.100	"	"	"	"	"	
Xylenes, total	ND	0.100	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	121 %	70-130			"	"	"	
Surrogate: Toluene-d8	97.4 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.79		pH Units	1	5C16008	03/16/2015	03/17/2015	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.113		mmhos/cm	"	5C16009	"	03/17/2015	
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TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	50	mg/kg	1	5C17005	03/17/2015	03/17/2015	
Diesel (C10-C28)	4600	50	"	"	"	"	"	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl	120 %	65-146			"	"	"	
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LT Environmental, Inc.
 4600 West 60th Avenue
 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Burkhardt 34N-3HZ

SS04

3/17/2015 2:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X503200-04 (Soil)

BTEX by EPA 8260C

Benzene	ND	0.002	mg/kg	1	5C16006	03/17/2015	03/17/2015	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	109 %	70-130			"	"	"	
Surrogate: Toluene-d8	94.0 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	87.3 %	70-130			"	"	"	

pH in Soil by EPA 9045D

pH	8.18		pH Units	1	5C16008	03/16/2015	03/17/2015	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.258		mmhos/cm	"	5C16009	"	03/17/2015	
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TPH-Carbon Chain by EPA Method 8015C

Gasoline (C6-C10)	ND	50	mg/kg	1	5C17005	03/17/2015	03/17/2015	
Diesel (C10-C28)	ND	50	"	"	"	"	"	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl	66.7 %	65-146			"	"	"	
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John Cocroft
 Project Number: [none]
 Project: KMG - Burkhardt 34N-3HZ

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 5C16006 - EPA 5030 (soil)

Blank (5C16006-BLK1)

Prepared: 03/16/2015 Analyzed: 03/17/2015

Benzene	ND	0.002	mg/kg							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	60		"	62.5		95.3	70-130			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		93.4	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 5C16006 - EPA 5030 (soil)

LCS (5C16006-BS1)

Prepared: 03/16/2015 Analyzed: 03/17/2015

Benzene	0.122	0.002	mg/kg	0.100		122	77.1-124			
Toluene	0.100	0.002	"	0.100		100	74.5-128			
Ethylbenzene	0.090	0.002	"	0.100		89.9	66.4-127			
m,p-Xylene	0.173	0.004	"	0.200		86.4	76.6-124			
o-Xylene	0.092	0.002	"	0.100		91.6	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	80		ug/kg	62.5		128	70-130			
Surrogate: Toluene-d8	72		"	62.5		115	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	70-130			

Origins Laboratory, Inc.



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 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Burkhardt 34N-3HZ

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 5C16006 - EPA 5030 (soil)

Matrix Spike (5C16006-MS1)	Source: X503152-01			Prepared: 03/16/2015 Analyzed: 03/17/2015						
Benzene	0.106	0.002	mg/kg	0.100	ND	106	71.8-126			
Toluene	0.082	0.002	"	0.100	ND	81.8	65.1-130			
Ethylbenzene	0.088	0.002	"	0.100	ND	87.9	62.2-130			
m,p-Xylene	0.175	0.004	"	0.200	ND	87.5	46.5-137			
o-Xylene	0.093	0.002	"	0.100	ND	92.8	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	69		ug/kg	62.5		110	70-130			
Surrogate: Toluene-d8	58		"	62.5		92.0	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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 Arvada CO 80003

John Cocroft
 Project Number: [none]
 Project: KMG - Burkhardt 34N-3HZ

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 5C16006 - EPA 5030 (soil)

Matrix Spike Dup (5C16006-MSD1)	Source: X503152-01			Prepared: 03/16/2015 Analyzed: 03/17/2015						
Benzene	0.115	0.002	mg/kg	0.100	ND	115	71.8-126	8.40	11.3	
Toluene	0.088	0.002	"	0.100	ND	88.2	65.1-130	7.51	15.4	
Ethylbenzene	0.079	0.002	"	0.100	ND	79.5	62.2-130	10.1	19.6	
m,p-Xylene	0.168	0.004	"	0.200	ND	84.2	46.5-137	3.80	19.2	
o-Xylene	0.088	0.002	"	0.100	ND	88.1	54.2-134	5.20	17.9	
Surrogate: 1,2-Dichloroethane-d4	77		ug/kg	62.5		124	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

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

John Cocroft
 Project Number: [none]
 Project: KMG - Burkhardt 34N-3HZ

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 5C17005 - EPA 3580

Blank (5C17005-BLK1)

Prepared: 03/17/2015 Analyzed: 03/17/2015

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

Surrogate: *o*-Terphenyl 37.2 " 50.0 74.4 65-146

LCS (5C17005-BS1)

Prepared: 03/17/2015 Analyzed: 03/17/2015

Gasoline (C6-C10)	800	50	mg/kg	1000		80.1	66.7-119			
Diesel (C10-C28)	710	50	"	1000		71.0	70.1-127			
Residual Range Organics (C28-C36)	710	200	"	1000		70.5	54.5-139			

Surrogate: *o*-Terphenyl 34.3 " 50.0 68.7 65-146

Matrix Spike (5C17005-MS1)

Source: X503184-01

Prepared: 03/17/2015 Analyzed: 03/17/2015

Gasoline (C6-C10)	930	50	mg/kg	1000	28	90.1	56.4-132			
Diesel (C10-C28)	840	50	"	1000	24	81.1	57.4-138			
Residual Range Organics (C28-C36)	820	200	"	1000	5.8	81.9	47.7-129			

Surrogate: *o*-Terphenyl 35.1 " 50.0 70.2 65-146

Matrix Spike Dup (5C17005-MSD1)

Source: X503184-01

Prepared: 03/17/2015 Analyzed: 03/17/2015

Gasoline (C6-C10)	960	50	mg/kg	1000	28	93.1	56.4-132	3.14	22	
Diesel (C10-C28)	900	50	"	1000	24	87.5	57.4-138	7.37	18.3	
Residual Range Organics (C28-C36)	940	200	"	1000	5.8	93.3	47.7-129	12.9	30.1	

Surrogate: *o*-Terphenyl 37.5 " 50.0 75.0 65-146

Origins Laboratory, Inc.



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

John Cocroft
 Project Number: [none]
 Project: KMG - Burkhardt 34N-3HZ

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 5C16008 - NO PREP										
Duplicate (5C16008-DUP1)		Source: X503154-01			Prepared: 03/16/2015 Analyzed: 03/17/2015					
pH	8.57		pH Units		8.48			1.06	25	
Batch 5C16009 - NO PREP										
Blank (5C16009-BLK1)		Prepared: 03/16/2015 Analyzed: 03/17/2015								
Specific Conductance (EC)	0.00270		mmhos/cm							
Duplicate (5C16009-DUP1)		Source: X503154-01			Prepared: 03/16/2015 Analyzed: 03/17/2015					
Specific Conductance (EC)	1.09		mmhos/cm		1.11			2.18	25	

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

John Cocroft
Project Number: [none]
Project: KMG - Burkhardt 34N-3HZ

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President