



May 28, 2015

LT Environmental, Inc.

Rob Rebel

4600 West 60th Avenue

Arvada CO 80003

Project Name - Siefken 11-30H

Project Number - 027315012

Attached are your analytical results for Siefken 11-30H received by Origins Laboratory, Inc. May 27, 2015. This project is associated with Origins project number X505255-01.

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

Rob Rebel
Project Number: 027315012
Project: Siefken 11-30H

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@3'	X505255-01	Soil	May 27, 2015 14:00	05/27/2015 17:08
SS02@3'	X505255-02	Soil	May 27, 2015 14:20	05/27/2015 17:08
SS03@3'	X505255-03	Soil	May 27, 2015 14:20	05/27/2015 17:08
SS04@3'	X505255-04	Soil	May 27, 2015 14:30	05/27/2015 17:08
SS05@5'	X505255-05	Soil	May 27, 2015 14:40	05/27/2015 17:08

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

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

Rob Rebel
 Project Number: 027315012
 Project: Siefken 11-30H

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4505255

Client: LTE

Client Project ID: Siefken 11-30H

Checklist Completed by: J. Henderson

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

Date/time completed: 5/27/15

Airbill #: _____

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

Cooler Number/Temperature: 1 / 1.61 °C _____ / _____ °C _____ / _____ °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 ⁽¹⁾ ?		X		Sampled Sunday
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		
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 HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			X	
Additional Comments (if any): No method specified from client for GRO. Project Manager has a history using both 8260 & 8015. Ran both methods to ensure correct data for client.				

⁽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.

JM
 Reviewed by (Project Manager)

5/28/15
 Date/Time Reviewed

Origins Laboratory, Inc.



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

Rob Rebel
 Project Number: 027315012
 Project: Siefken 11-30H

SS01@3'
5/27/2015 2:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X505255-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5E27015	05/27/2015	05/28/2015	
Surrogate: o-Terphenyl	83.7 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5E27014	05/27/2015	05/28/2015	
Benzene	0.005	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	115 %	70-130			"	"	"	
Surrogate: Toluene-d8	95.7 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"	

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

Rob Rebel
 Project Number: 027315012
 Project: Siefken 11-30H

SS02@3'
5/27/2015 2:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X505255-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5E27015	05/27/2015	05/28/2015	
Surrogate: o-Terphenyl	87.7 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5E27014	05/27/2015	05/28/2015	
Benzene	0.015	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	0.004	0.002	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	115 %	70-130			"	"	"	
Surrogate: Toluene-d8	96.0 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	

Origins Laboratory, Inc.



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

Rob Rebel
 Project Number: 027315012
 Project: Siefken 11-30H

SS03@3'
5/27/2015 2:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X505255-03 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5E27015	05/27/2015	05/28/2015	
Surrogate: o-Terphenyl	77.0 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5E27014	05/27/2015	05/28/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	113 %	70-130			"	"	"	
Surrogate: Toluene-d8	97.2 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"	

Origins Laboratory, Inc.



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

Rob Rebel
 Project Number: 027315012
 Project: Siefken 11-30H

SS04@3'
5/27/2015 2:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X505255-04 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5E27015	05/27/2015	05/28/2015	
Surrogate: o-Terphenyl	82.2 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	0.221	0.200	mg/kg	1	5E27014	05/27/2015	05/28/2015	
Benzene	0.025	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	0.002	0.002	"	"	"	"	"	
Xylenes, total	0.006	0.002	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"	
Surrogate: Toluene-d8	97.1 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"	"	

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

Rob Rebel
 Project Number: 027315012
 Project: Siefken 11-30H

SS05@5'
5/27/2015 2:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X505255-05 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	5E27015	05/27/2015	05/28/2015	
Surrogate: o-Terphenyl	78.5 %	59-131			"	"	"	

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5E27014	05/27/2015	05/28/2015	
Benzene	0.002	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	97.3 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"	

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 Arvada CO 80003

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 Project Number: 027315012
 Project: Siefken 11-30H

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 5E27014 - EPA 5030 (soil)

Blank (5E27014-BLK1)

Prepared: 05/27/2015 Analyzed: 05/27/2015

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	68.7		ug/kg	62.5		110	70-130			
Surrogate: Toluene-d8	61.4		"	62.5		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	62.5		"	62.5		100	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 5E27014 - EPA 5030 (soil)

LCS (5E27014-BS1)

Prepared: 05/27/2015 Analyzed: 05/27/2015

Benzene	0.102	0.002	mg/kg	0.100		102	77.1-124			
Toluene	0.099	0.002	"	0.100		99.1	74.5-128			
Ethylbenzene	0.098	0.002	"	0.100		97.8	66.4-127			
m,p-Xylene	0.197	0.004	"	0.200		98.3	76.6-124			
o-Xylene	0.102	0.002	"	0.100		102	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	65.2		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	62.1		"	62.5		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	62.8		"	62.5		101	70-130			

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 Project: Siefken 11-30H

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 5E27014 - EPA 5030 (soil)

Matrix Spike (5E27014-MS1)	Source: X505253-01			Prepared: 05/27/2015 Analyzed: 05/27/2015						
Benzene	0.103	0.002	mg/kg	0.100	ND	103	71.8-126			
Toluene	0.099	0.002	"	0.100	ND	98.6	65.1-130			
Ethylbenzene	0.098	0.002	"	0.100	ND	97.6	62.2-130			
m,p-Xylene	0.196	0.004	"	0.200	ND	98.1	46.5-137			
o-Xylene	0.102	0.002	"	0.100	ND	102	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	66.0		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	60.9		"	62.5		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	61.5		"	62.5		98.3	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 5E27014 - EPA 5030 (soil)

Matrix Spike Dup (5E27014-MSD1)	Source: X505253-01			Prepared: 05/27/2015 Analyzed: 05/27/2015						
Benzene	0.106	0.002	mg/kg	0.100	ND	106	71.8-126	2.24	11.3	
Toluene	0.103	0.002	"	0.100	ND	103	65.1-130	4.19	15.4	
Ethylbenzene	0.099	0.002	"	0.100	ND	98.5	62.2-130	0.959	19.6	
m,p-Xylene	0.199	0.004	"	0.200	ND	99.5	46.5-137	1.43	19.2	
o-Xylene	0.104	0.002	"	0.100	ND	104	54.2-134	1.38	17.9	
Surrogate: 1,2-Dichloroethane-d4	66.5		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	61.6		"	62.5		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	61.1		"	62.5		97.7	70-130			

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 Project: Siefken 11-30H

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 5E27015 - EPA 3580

Blank (5E27015-BLK1)

Prepared: 05/27/2015 Analyzed: 05/27/2015

Diesel (C10-C28)	ND	50.0	mg/kg							
Surrogate: o-Terphenyl	48		"	50.0		96.5	59-131			

LCS (5E27015-BS1)

Prepared: 05/27/2015 Analyzed: 05/27/2015

Diesel (C10-C28)	893	50.0	mg/kg	1000		89.3	64-121			
Surrogate: o-Terphenyl	48		"	50.0		95.9	59-131			

Matrix Spike (5E27015-MS1)

Source: X505253-01

Prepared: 05/27/2015 Analyzed: 05/27/2015

Diesel (C10-C28)	888	50.0	mg/kg	1000	23.1	86.5	53-125			
Surrogate: o-Terphenyl	44		"	50.0		88.3	59-131			

Matrix Spike Dup (5E27015-MSD1)

Source: X505253-01

Prepared: 05/27/2015 Analyzed: 05/27/2015

Diesel (C10-C28)	855	50.0	mg/kg	1000	23.1	83.2	53-125	3.84	20	
Surrogate: o-Terphenyl	44		"	50.0		88.6	59-131			

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Rob Rebel
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Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President