

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

January 30, 2017

Brett Forkner

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: Hebron 2-07H Cuttings Pit

Enclosed are the results of analyses for samples received by Summit Scientific on 01/23/17 16:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



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

Project: Hebron 2-07H Cuttings Pit

Project Number: 065815003.12
Project Manager: Brett Forkner

Reported:
01/30/17 15:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
H 2-07H@1'	1701149-01	Soil	01/19/17 15:45	01/23/17 16:15

Summit Scientific

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Summit Scientific

1701149

S₂

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Page 1 of 1

Client: LTC Project Manager: BRETT FORKNER
Address: 4600 W 60TH AVE E-Mail: BFORKNER@LTCENV.COM
City/State/Zip: ARVADA CO
Phone: 303 433 9258 Fax: Project Name: HEBRON 2-07H
Sampler Name: MICHAEL JAMES Project Number: 065815003.12

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	6 BTX	DLO		
1	H 2-07H e.1'	1/19/17	1545	2			X			X			X	X		
2																
3																
4																
5																
6																
7																
8																
9																
10																

Relinquished by: <u>Michael James</u>	Date/Time: <u>1-23-17 11:00</u>	Received by: <u>JK</u>	Date/Time: <u>1/23/17 11:00</u>	Turn Around Time (Check)	Notes: <u>on ice</u>
Relinquished by: <u>JK</u>	Date/Time: <u>1/23/17 16:15</u>	Received by: <u>MC</u>	Date/Time: <u>1/23/17 16:15</u>	Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/>	
Relinquished by: <u>JK</u>	Date/Time: <u>1/23/17 17:10</u>	Received by: <u>JK</u>	Date/Time: <u>1-23 17:10</u>	24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>	
				48 hours <input type="checkbox"/>	Sample Integrity:
				Temperature Upon Receipt: <u>3.1°C</u>	
				Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

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Sample Receipt Checklist
S2 Work Order: 1701149
Client: LTE Client Project ID: Hebron 2-07H
Shipped Via: PU Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Cooler ID					
Temp (°C)	3.1				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	✓			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are short holding time analytes or samples with HTs due within 48 hours present?			✓	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	✓			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	✓			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			✓	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Nakitz
Custodian Printed Name

[Signature]
Signature or Initials of Custodian

1/23/17 17:00
Date/Time

[Signature]



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H 2-07H@1'
1701149-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/19/17 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	6000	50	mg/kg	1	1701225	01/24/17	01/25/17	8015M	

Date Sampled: **01/19/17 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		544 %	30-150		"	"	"	"	S-02

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/19/17 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	9.1	0.20	mg/kg	100	1701226	01/24/17	01/28/17	EPA 8260B	
Toluene	37	0.50	"	"	"	"	"	"	
Ethylbenzene	15	0.50	"	"	"	"	"	"	
Xylenes (total)	58	0.50	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1600	50	"	"	"	"	"	"	

Date Sampled: **01/19/17 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		100 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		93.5 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		136 %	21-167		"	"	"	"	

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Project Number: 065815003.12
Project Manager: Brett Forkner

Reported:
01/30/17 15:52

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 1701225 - EPA 3550A

Blank (1701225-BLK1)

Prepared & Analyzed: 01/24/17

C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	11.3		"	12.5		90.4	30-150				

LCS (1701225-BS1)

Prepared: 01/24/17 Analyzed: 01/25/17

C10-C28 (DRO)	415	50	mg/kg	499		83.2	73-134				
<i>Surrogate: o-Terphenyl</i>	11.7		"	12.5		93.8	30-150				

Matrix Spike (1701225-MS1)

Source: 1701130-01

Prepared: 01/24/17 Analyzed: 01/25/17

C10-C28 (DRO)	440	50	mg/kg	499	24.6	83.2	50-148				
<i>Surrogate: o-Terphenyl</i>	12.0		"	12.5		96.0	30-150				

Matrix Spike Dup (1701225-MSD1)

Source: 1701130-01

Prepared: 01/24/17 Analyzed: 01/25/17

C10-C28 (DRO)	469	50	mg/kg	499	24.6	89.0	50-148	6.42	20		
<i>Surrogate: o-Terphenyl</i>	12.3		"	12.5		98.0	30-150				

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1701226 - EPA 5030 Soil MS

Blank (1701226-BLK1)

Prepared & Analyzed: 01/24/17

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0350</i>		<i>"</i>	<i>0.0400</i>		<i>87.4</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0415</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

LCS (1701226-BS1)

Prepared & Analyzed: 01/24/17

Benzene	0.113	0.0020	mg/kg	0.100		113	58-130			
Toluene	0.110	0.0050	"	0.100		110	61-134			
Ethylbenzene	0.111	0.0050	"	0.0992		112	74-139			
m,p-Xylene	0.213	0.010	"	0.200		107	73-137			
o-Xylene	0.112	0.0050	"	0.0980		114	73-141			
Xylenes (total)	0.325	0.0050	"				30-150			
Gasoline Range Hydrocarbons	0.815	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0335</i>		<i>"</i>	<i>0.0400</i>		<i>83.8</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0420</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0416</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>21-167</i>			

Matrix Spike (1701226-MS1)

Source: 1701148-01

Prepared: 01/24/17 Analyzed: 01/25/17

Benzene	0.0752	0.0020	mg/kg	0.100	ND	75.2	30-131			
Toluene	0.0612	0.0050	"	0.100	ND	61.2	30-134			
Ethylbenzene	0.0496	0.0050	"	0.0992	ND	50.0	22-153			
m,p-Xylene	0.0901	0.010	"	0.200	ND	45.1	10-159			
o-Xylene	0.0543	0.0050	"	0.0980	ND	55.4	31-151			
Xylenes (total)	0.144	0.0050	"		ND		30-150			
Gasoline Range Hydrocarbons	0.911	0.50	"		1.35		30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0350</i>		<i>"</i>	<i>0.0400</i>		<i>87.5</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0414</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0410</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1701226 - EPA 5030 Soil MS

Matrix Spike Dup (1701226-MSD1)	Source: 1701148-01			Prepared: 01/24/17		Analyzed: 01/25/17				
Benzene	0.0805	0.0020	mg/kg	0.100	ND	80.5	30-131	6.82	34	
Toluene	0.0671	0.0050	"	0.100	ND	67.1	30-134	9.31	30	
Ethylbenzene	0.0560	0.0050	"	0.0992	ND	56.5	22-153	12.2	24	
m,p-Xylene	0.101	0.010	"	0.200	ND	50.6	10-159	11.5	68	
o-Xylene	0.0563	0.0050	"	0.0980	ND	57.5	31-151	3.69	38	
Xylenes (total)	0.157	0.0050	"		ND		30-150	8.61	20	
Gasoline Range Hydrocarbons	1.30	0.50	"		1.35		30-150	35.1	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0353		"	0.0400		88.2	23-173			
Surrogate: Toluene-d8	0.0417		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	21-167			

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Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference