

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 22, 2015

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: Hoffman C2-65HN

Enclosed are the results of analyses for samples received by Summit Scientific on 02/20/15 17:33. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



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

Project: Hoffman C2-65HN

Project Number: 008315010
Project Manager: Chris Roy

Reported:
02/22/15 20:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Hoffman Floor @ 7	1502144-01	Soil	02/20/15 14:30	02/20/15 17:33
Hoffman Side @ 2.5	1502144-02	Soil	02/20/15 14:30	02/20/15 17:33

Summit Scientific

A handwritten signature in black ink, appearing to be 'MSM'.

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

Project: Hoffman C2-65HN

Project Number: 008315010
Project Manager: Chris Roy

Reported:
02/22/15 20:33

Summit Scientific *150214*

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741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Page *1* of *1*

Client: *LT Environmental - 1* Project Manager: *Chris Roy*
Address: *4600 W 60th Ave* E-Mail: *CRROY@LTENV.COM / CG-REASON@LTENV.COM*
City/State/Zip: *Arvada, CO* Project Name: *HOFFMAN C 02-65HN*
Phone: Fax: Project Number:
Sampler Name: *Chris Reason*

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	ORO	GRO	NAPHL	PAH	GC	SAR		
1	<i>Hoffman Floor @ 7</i>	<i>2/20/15</i>	<i>14:50</i>	<i>1</i>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	<i>Hoffman Side @ 2.5</i>	<i>2/20/15</i>	<i>14:30</i>	<i>1</i>										<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <i>[Signature]</i>	Date/Time: <i>2/20/15 1641</i>	Received by: <i>[Signature]</i>	Date/Time: <i>2/20/15 1641</i>	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours — 24 hours — Standard — 48 hours —	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: <i>86°C</i> Intact: <input checked="" type="checkbox"/> Yes No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

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

Project: Hoffman C2-65HN
Project Number: 008315010
Project Manager: Chris Roy

Reported:
02/22/15 20:33

Hoffman Floor @ 7
1502144-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1502224	02/20/15	02/20/15	8015M	

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1502223	02/20/15	02/20/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.4 %	21-167		"	"	"	"	

Summit Scientific

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4600 West 60th Avenue
Arvada CO, 80003

Project: Hoffman C2-65HN
Project Number: 008315010
Project Manager: Chris Roy

Reported:
02/22/15 20:33

Hoffman Side @ 2.5
1502144-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1502224	02/20/15	02/20/15	8015M	

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1502223	02/20/15	02/20/15	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.7 %	21-167		"	"	"	"	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Hoffman C2-65HN
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Project Manager: Chris Roy

Reported:
02/22/15 20:33

Hoffman Side @ 2.5
1502144-02 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Calcium	685	10.7 mg/kg dry	1	1502217	02/20/15	02/20/15	EPA 6020/Mod. USDA60 6(2, 3A)
Magnesium	163	5.37	"	"	"	"	"
Sodium	110	5.37	"	"	"	"	"

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.980		units	"	1502229	02/22/15	02/22/15	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.316	0.0100 mmhos/cm		1	1502206	02/20/15	02/20/15	SM 2510B	

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.63	0.100 pH Units		"	1502205	"	02/20/15	EPA 9045	

Date Sampled: 02/20/15 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.1		%	"	1502222	02/20/15	02/22/15	% calculation	

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Project: Hoffman C2-65HN
Project Number: 008315010
Project Manager: Chris Roy

Reported:
02/22/15 20:33

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1502224 - EPA 3550A

Blank (1502224-BLK1)

Prepared & Analyzed: 02/20/15

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.2 " 12.2 100 30-150

LCS (1502224-BS1)

Prepared & Analyzed: 02/20/15

C10-C28 (DRO) 554 50 mg/kg 501 111 73-134

Surrogate: o-Terphenyl 12.0 " 12.2 98.6 30-150

Matrix Spike (1502224-MS1)

Source: 1502144-01

Prepared & Analyzed: 02/20/15

C10-C28 (DRO) 578 50 mg/kg 489 21.9 114 50-148

Surrogate: o-Terphenyl 11.7 " 11.9 98.3 30-150

Matrix Spike Dup (1502224-MSD1)

Source: 1502144-01

Prepared & Analyzed: 02/20/15

C10-C28 (DRO) 587 50 mg/kg 484 21.9 117 50-148 1.46 13

Surrogate: o-Terphenyl 11.8 " 11.8 100 30-150

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Project: Hoffman C2-65HN
Project Number: 008315010
Project Manager: Chris Roy

Reported:
02/22/15 20:33

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

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

Batch 1502223 - EPA 5030 Soil MS

Blank (1502223-BLK1)

Prepared & Analyzed: 02/20/15

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0409</i>		<i>"</i>	<i>0.0396</i>		<i>103</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>95.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0389</i>		<i>"</i>	<i>0.0400</i>		<i>97.2</i>	<i>21-167</i>			

LCS (1502223-BS1)

Prepared & Analyzed: 02/20/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.106	0.0020	"	0.100		106	58-130			
Toluene	0.100	0.0050	"	0.100		100	61-134			
Ethylbenzene	0.101	0.0050	"	0.0992		102	74-139			
m,p-Xylene	0.198	0.010	"	0.200		99.1	73-137			
o-Xylene	0.0966	0.0050	"	0.0984		98.2	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0431</i>		<i>"</i>	<i>0.0396</i>		<i>109</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0390</i>		<i>"</i>	<i>0.0400</i>		<i>97.6</i>	<i>21-167</i>			

Matrix Spike (1502223-MS1)

Source: 1502144-01

Prepared & Analyzed: 02/20/15

Naphthalene	0.00455	0.010	mg/kg		ND		10-158			
Benzene	0.0952	0.0020	"	0.0942	ND	101	30-131			
Toluene	0.0892	0.0050	"	0.0942	ND	94.7	30-134			
Ethylbenzene	0.0892	0.0050	"	0.0934	ND	95.4	22-153			
m,p-Xylene	0.176	0.010	"	0.188	ND	93.5	10-159			
o-Xylene	0.0867	0.0050	"	0.0927	ND	93.5	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0394</i>		<i>"</i>	<i>0.0373</i>		<i>106</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0364</i>		<i>"</i>	<i>0.0377</i>		<i>96.8</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0357</i>		<i>"</i>	<i>0.0377</i>		<i>94.9</i>	<i>21-167</i>			

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Arvada CO, 80003

Project: Hoffman C2-65HN
Project Number: 008315010
Project Manager: Chris Roy

Reported:
02/22/15 20:33

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

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

Batch 1502223 - EPA 5030 Soil MS

Matrix Spike Dup (1502223-MSD1)		Source: 1502144-01			Prepared & Analyzed: 02/20/15					
Naphthalene	0.00515	0.010	mg/kg		ND		10-158	12.4	42	
Benzene	0.0787	0.0020	"	0.0928	ND	84.9	30-131	18.9	34	
Toluene	0.0744	0.0050	"	0.0928	ND	80.2	30-134	18.1	30	
Ethylbenzene	0.0748	0.0050	"	0.0920	ND	81.3	22-153	17.5	24	
m,p-Xylene	0.151	0.010	"	0.185	ND	81.6	10-159	15.1	68	
o-Xylene	0.0752	0.0050	"	0.0913	ND	82.4	31-151	14.2	38	
Surrogate: 1,2-Dichloroethane-d4	0.0383		"	0.0367		104	23-173			
Surrogate: Toluene-d8	0.0362		"	0.0371		97.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0374		"	0.0371		101	21-167			

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Arvada CO, 80003

Project: Hoffman C2-65HN
Project Number: 008315010
Project Manager: Chris Roy

Reported:
02/22/15 20:33

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis - Quality Control
Summit Scientific

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

Batch 1502217 - General Preparation

Blank (1502217-BLK1)

Prepared & Analyzed: 02/20/15

Calcium	ND	10.0	mg/kg wet
Magnesium	ND	5.00	"
Sodium	ND	5.00	"

LCS (1502217-BS1)

Prepared & Analyzed: 02/20/15

Calcium	538	10.0	mg/kg wet	500	108	80-120
Magnesium	531	5.00	"	500	106	80-120
Sodium	579	5.00	"	500	116	80-120

Duplicate (1502217-DUP1)

Source: 1502142-01

Prepared & Analyzed: 02/20/15

Calcium	3400	14.1	mg/kg dry	4230	21.9	200
Magnesium	370	7.03	"	435	16.0	200
Sodium	2310	7.03	"	2170	6.36	200

Matrix Spike (1502217-MS1)

Source: 1502142-01

Prepared & Analyzed: 02/20/15

Calcium	4250	11.9	mg/kg dry	596	4230	3.09	75-125	QM-07
Magnesium	982	5.96	"	596	435	91.9	75-125	
Sodium	2360	5.96	"	596	2170	32.3	75-125	QM-07

Matrix Spike Dup (1502217-MSD1)

Source: 1502142-01

Prepared & Analyzed: 02/20/15

Calcium	3880	14.1	mg/kg dry	676	4230	NR	75-125	8.99	25	QM-07
Magnesium	1010	7.03	"	676	435	85.7	75-125	3.15	25	
Sodium	1920	7.03	"	676	2170	NR	75-125	20.7	25	QM-07

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Arvada CO, 80003

Project: Hoffman C2-65HN
Project Number: 008315010
Project Manager: Chris Roy

Reported:
02/22/15 20:33

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

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

Batch 1502205 - General Preparation

LCS (1502205-BS1)

Prepared & Analyzed: 02/20/15

pH	7.99	0.100	pH Units	8.00	99.9	95-105
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Duplicate (1502205-DUP1)

Source: 1502142-01

Prepared & Analyzed: 02/20/15

pH	6.83	0.100	pH Units	6.75	1.18	20
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Batch 1502206 - General Preparation

Blank (1502206-BLK1)

Prepared & Analyzed: 02/20/15

Specific Conductance (EC)	ND	0.0100	mmhos/cm
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LCS (1502206-BS1)

Prepared & Analyzed: 02/20/15

Specific Conductance (EC)	486	0.0100	mmhos/cm	500	97.1	90-110
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Duplicate (1502206-DUP1)

Source: 1502142-01

Prepared & Analyzed: 02/20/15

Specific Conductance (EC)	6.79	0.0100	mmhos/cm	6.80	0.147	20
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Batch 1502222 - General Preparation

Duplicate (1502222-DUP1)

Source: 1502141-01

Prepared: 02/20/15 Analyzed: 02/22/15

% Solids	96.5	%	88.4	8.76	20
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4600 West 60th Avenue
Arvada CO, 80003

Project: Hoffman C2-65HN

Project Number: 008315010
Project Manager: Chris Roy

Reported:
02/22/15 20:33

Notes and Definitions

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