



89

Gordon 1261-28-32 Location

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Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 16, 2015

Chris Roy
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: GORDON 1261-32

Enclosed are the results of analyses for samples received by Summit Scientific on 10/15/15 17:25. 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: GORDON 1261-32

Project Number: 0083-15061
Project Manager: Chris Roy

Reported:
10/16/15 06:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS04@2.5'	1510091-01	Soil	10/15/15 12:25	10/15/15 17:25
SS05@5"	1510091-02	Soil	10/15/15 12:30	10/15/15 17:25

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

Project: GORDON 1261-32

Project Number: 0083-15061
Project Manager: Chris Roy

Reported:
10/16/15 06:51

Summit Scientific 1510091

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Page 1 of 1

Client: LT Environmental Inc	Project Manager: CHRIS ROY
Address: 4600 W 60th Ave	E-Mail: CROY@LTENV.COM
City/State/Zip: Arvada, CO 80003	Project Name: GORDON 1261-32
Phone: Fax:	Project Number: 8315061
Sampler Name: Jayson Evangelista	

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:							Special Instructions
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX	DRO/GRO	NAPTHALENE	PH	EC	SAR	
SS04@2.5'	10/15/2015	1225	4								X	X	X	X	X	X		
SS05@5"	10/15/2015	1230	2								X	X	X					
Relinquished by: <i>[Signature]</i> Date/Time: 10/15/15 1630				Received by: <i>[Signature]</i> Date/Time: 10/15/15 1630				Turn Around Time (Check)				Notes:						
Relinquished by: <i>[Signature]</i> Date/Time: 10/15/15 1725				Received by:				Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/>				on ice						
Relinquished by:				Received in Lab by:				24 Hours <input type="checkbox"/> Standard <input type="checkbox"/>										
Relinquished by:				Received in Lab by:				48 Hours <input type="checkbox"/>				Sample Integrity: Temperature Upon Receipt: 11.4°C						
								Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>										

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Project: GORDON 1261-32

Project Number: 0083-15061
Project Manager: Chris Roy

Reported:
10/16/15 06:51

SS04@2.5'
1510091-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/15/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1510129	10/15/15	10/15/15	8015M	

Date Sampled: 10/15/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		102 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/15/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1510128	10/15/15	10/16/15	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: 10/15/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

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

Date Sampled: 10/15/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SS04@2.5'
1510091-01 (Soil)

Summit Scientific

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

Analyte	Result	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	7630	11.6 mg/kg dry	1	1510130	10/15/15	10/15/15	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	1270	5.81 "	"	"	"	"	"	
Sodium	233	5.81 "	"	"	"	"	"	

Date Sampled: 10/15/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.650		units	"	1510132	10/16/15	10/16/15	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 10/15/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.628	0.0100	mmhos/cm	1	1510122	10/15/15	10/15/15	SM 2510B	

Date Sampled: 10/15/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.95	0.100	pH Units	"	1510121	10/15/15	"	EPA 9045	

Date Sampled: 10/15/15 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.1		%	"	1510131	10/15/15	10/16/15	% calculation	

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Project: GORDON 1261-32

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Reported:
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SS05@5"
1510091-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 10/15/15 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1510129	10/15/15	10/15/15	8015M	

Date Sampled: 10/15/15 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		102 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 10/15/15 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1510128	10/15/15	10/16/15	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: 10/15/15 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	21-167		"	"	"	"	

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Project Number: 0083-15061
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Reported:
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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 1510129 - EPA 3550A

Blank (1510129-BLK1)				Prepared & Analyzed: 10/15/15							
C10-C28 (DRO)	ND	50	mg/kg								
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.2	101	30-150					
LCS (1510129-BS1)				Prepared & Analyzed: 10/15/15							
C10-C28 (DRO)	499	50	mg/kg	499	100	73-134					
Surrogate: <i>o</i> -Terphenyl	12.4		"	12.2	102	30-150					
Matrix Spike (1510129-MS1)				Source: 1510090-01		Prepared & Analyzed: 10/15/15					
C10-C28 (DRO)	589	50	mg/kg	487	98.5	101	50-148				
Surrogate: <i>o</i> -Terphenyl	12.7		"	11.9	106	30-150					
Matrix Spike Dup (1510129-MSD1)				Source: 1510090-01		Prepared & Analyzed: 10/15/15					
C10-C28 (DRO)	588	50	mg/kg	483	98.5	102	50-148	0.174	13		
Surrogate: <i>o</i> -Terphenyl	12.5		"	11.8	106	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 1510128 - EPA 5030 Soil MS

Blank (1510128-BLK1)

Prepared & Analyzed: 10/15/15

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>0.0452</i>		<i>"</i>	<i>0.0396</i>		<i>114</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0409</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0428</i>		<i>"</i>	<i>0.0400</i>		<i>107</i>	<i>21-167</i>			

LCS (1510128-BS1)

Prepared & Analyzed: 10/15/15

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.104	0.0020	"	0.100		104	58-130			
Toluene	0.0954	0.0050	"	0.100		95.4	61-134			
Ethylbenzene	0.104	0.0050	"	0.0992		105	74-139			
m,p-Xylene	0.202	0.010	"	0.200		101	73-137			
o-Xylene	0.108	0.0050	"	0.0984		110	73-141			
Xylenes (total)	0.311	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.05	0.50	"				30-150			
<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>0.0439</i>		<i>"</i>	<i>0.0400</i>		<i>110</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0430</i>		<i>"</i>	<i>0.0400</i>		<i>108</i>	<i>21-167</i>			

Matrix Spike (1510128-MS1)

Source: 1510090-01

Prepared & Analyzed: 10/15/15

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.104	0.0020	"	0.0954	ND	109	30-131			
Toluene	0.0942	0.0050	"	0.0954	ND	98.7	30-134			
Ethylbenzene	0.108	0.0050	"	0.0947	ND	114	22-153			
m,p-Xylene	0.207	0.010	"	0.190	ND	108	10-159			
o-Xylene	0.114	0.0050	"	0.0939	ND	121	31-151			
Xylenes (total)	0.320	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	ND	0.50	"		3.12		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0429</i>		<i>"</i>	<i>0.0378</i>		<i>113</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0410</i>		<i>"</i>	<i>0.0382</i>		<i>107</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0407</i>		<i>"</i>	<i>0.0382</i>		<i>107</i>	<i>21-167</i>			

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Project Number: 0083-15061
Project Manager: Chris Roy

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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 1510128 - EPA 5030 Soil MS

Matrix Spike Dup (1510128-MSD1)	Source: 1510090-01			Prepared & Analyzed: 10/15/15						
Naphthalene	ND	0.010	mg/kg	ND	ND	10-158			42	
Benzene	0.110	0.0020	"	0.0975	ND	113	30-131	6.20	34	
Toluene	0.100	0.0050	"	0.0975	ND	103	30-134	6.17	30	
Ethylbenzene	0.118	0.0050	"	0.0967	ND	122	22-153	8.56	24	
m,p-Xylene	0.225	0.010	"	0.195	ND	116	10-159	8.51	68	
o-Xylene	0.123	0.0050	"	0.0959	ND	128	31-151	8.01	38	
Xylenes (total)	0.348	0.010	"	0.00			30-160	8.33	30	
Gasoline Range Hydrocarbons	5.17	0.50	"		3.12		30-160		30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0463</i>		<i>"</i>	<i>0.0386</i>		<i>120</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0409</i>		<i>"</i>	<i>0.0390</i>		<i>105</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0412</i>		<i>"</i>	<i>0.0390</i>		<i>106</i>	<i>21-167</i>			

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

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

Batch 1510130 - General Preparation

Blank (1510130-BLK1)

Prepared & Analyzed: 10/15/15

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

LCS (1510130-BS1)

Prepared & Analyzed: 10/15/15

Calcium	580	10.0	mg/kg wet	500	116	82.9-118				
Magnesium	557	5.00	"	500	111	77.1-123				
Sodium	560	5.00	"	500	112	71-129				

Duplicate (1510130-DUP1)

Source: 1510091-01

Prepared & Analyzed: 10/15/15

Calcium	7090	11.6	mg/kg dry	7630			7.38	200		
Magnesium	1160	5.81	"	1270			9.22	200		
Sodium	178	5.81	"	233			27.0	200		

Matrix Spike (1510130-MS1)

Source: 1510091-01

Prepared & Analyzed: 10/15/15

Calcium	7590	11.6	mg/kg dry	581	7630	NR	75-125			QM-07
Magnesium	1710	5.81	"	581	1270	75.4	75-125			
Sodium	766	5.81	"	581	233	91.8	75-125			

Matrix Spike Dup (1510130-MSD1)

Source: 1510091-01

Prepared & Analyzed: 10/15/15

Calcium	7620	11.6	mg/kg dry	581	7630	NR	75-125	0.376	25	QM-07
Magnesium	1650	5.81	"	581	1270	65.0	75-125	3.60	25	QM-07
Sodium	723	5.81	"	581	233	84.3	75-125	5.80	25	

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Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1510121 - General Preparation

LCS (1510121-BS1)					Prepared & Analyzed: 10/15/15					
pH	7.95	0.100	pH Units	8.00	99.4	95-105				
Duplicate (1510121-DUP1)					Source: 1510088-02 Prepared & Analyzed: 10/15/15					
pH	9.17	0.100	pH Units	9.25	0.869	20				

Batch 1510122 - General Preparation

Blank (1510122-BLK1)					Prepared & Analyzed: 10/15/15					
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (1510122-BS1)					Prepared & Analyzed: 10/15/15					
Specific Conductance (EC)	0.506	0.0100	mmhos/cm	0.500	101	90-110				
Duplicate (1510122-DUP1)					Source: 1510088-02 Prepared & Analyzed: 10/15/15					
Specific Conductance (EC)	0.801	0.0100	mmhos/cm	0.678	16.5	20				

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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