

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 22, 2016

Brett Forkner
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: MA-1-3-6H-CB Preset

Enclosed are the results of analyses for samples received by Summit Scientific on 08/16/16 09:45. 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: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MA-1-3-6H-CB	1608121-01	Soil	08/15/16 13:00	08/16/16 09:45

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: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

Summit Scientific 1608121

S₂

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

Client: LTE Project Manager: BRETT FORKNER Page 1 of 1
Address: 4600 W 60th AVE E-Mail: bforkner@lteenv.com
City/State/Zip: _____
Phone: _____ Fax: _____ Project Name: MA-1-3-6H-CB PRESET
Sampler Name: TOO MALTEN Project Number: 065815003, 0602

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)									
1	MA-1-3-6H-CB	8/15/16	1300	2			X			X			X								
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <u>[Signature]</u>	Date/Time: <u>8/16/16 0945</u>	Received by: <u>[Signature]</u>	Date/Time: <u>8/16/16 945</u>	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours — 24 hours — Standard — 48 hours — Sample Integrity: Temperature Upon Receipt: <u>11.4°C</u> Intact: <input checked="" type="radio"/> Yes No	Notes: <u>on ice</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>8/16/16 10:25</u>	Received by: <u>[Signature]</u>	Date/Time: <u>8/16/16 10:25</u>		
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____		

www.s2scientific.com

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LT Environmental, Inc.
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Arvada CO, 80003

Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

Sample Receipt Checklist

S2 Work Order: 1608121

Client: LTE

Client Project ID: MA-1-3-6A-CB Preset

Shipped Via: P/U
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): Air ☒ Soil/Solid Water Other: _____
(Describe)

Cooler ID					
Temp (°C)	<u>11.4</u>				

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⁾ ?		<input checked="" type="checkbox"/>		
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⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form 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 w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Nakita
Custodian Printed Name

MM
Signature or initials of Custodian

8/16/16 10:25
Date/Time



LT Environmental, Inc.
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Arvada CO, 80003

Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

MA-1-3-6H-CB
1608121-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 08/15/16 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1608159	08/16/16	08/17/16	8015M	

Date Sampled: 08/15/16 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.0 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 08/15/16 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1608181	08/17/16	08/18/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	

Date Sampled: 08/15/16 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		95.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270D SIM

Date Sampled: 08/15/16 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	1608166	08/16/16	08/18/16	EPA 8270D	
Anthracene	ND	0.00500	"	"	"	"	"	SIM	

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Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

MA-1-3-6H-CB
1608121-01 (Soil)

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) anthracene	ND	0.00500	mg/kg	1	1608166	08/16/16	08/18/16	EPA 8270D SIM	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.00584	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Naphthalene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00559	0.00500	"	"	"	"	"	"	

Date Sampled: 08/15/16 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		64.5 %	30-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.0 %	30-150		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: 08/15/16 13:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.470	0.348	mg/kg dry	1	1608171	08/17/16	08/18/16	EPA 6020A	
Barium	455	0.696	"	"	"	"	"	"	
Cadmium	0.349	0.174	"	"	"	"	"	"	
Chromium	5.84	0.870	"	"	"	"	"	"	
Copper	48.8	0.870	"	"	"	"	"	"	
Lead	10.3	0.348	"	"	"	"	"	"	
Nickel	21.4	0.174	"	"	"	"	"	"	
Selenium	1.11	0.696	"	"	"	"	"	"	
Silver	ND	0.174	"	"	"	"	"	"	
Zinc	23.3	17.4	"	"	"	"	"	"	

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Project: MA-1-3-6H-CB Preset

Project Number: [none]
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Reported:
08/22/16 08:02

MA-1-3-6H-CB
1608121-01 (Soil)

Summit Scientific

Total Mercury by EPA Method 7471

Date Sampled: **08/15/16 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0870	mg/kg dry	1	1608190	08/18/16	08/18/16	EPA 7471	

Hexavalent Chromium by EPA 7196

Date Sampled: **08/15/16 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.300	mg/kg dry	1	1608169	08/17/16	08/19/16	EPA 7196	

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

Date Sampled: **08/15/16 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	643	17.4	mg/kg dry	1	1608173	08/17/16	08/18/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	235	8.70	"	"	"	"	"	"	
Sodium	1480	8.70	"	"	"	"	"	"	

Date Sampled: **08/15/16 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	12.7		units	"	1608203	08/19/16	08/19/16	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/15/16 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.85	0.0100	mmhos/cm	1	1608165	08/16/16	08/17/16	SM 2510B	

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Project Number: [none]
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08/22/16 08:02

MA-1-3-6H-CB
1608121-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/15/16 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.89	0.100	pH Units	1	1608164	08/16/16	08/16/16	EPA 9045	

Date Sampled: **08/15/16 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	57.5		%	"	1608172	08/17/16	08/18/16	% calculation	

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Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

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 1608159 - EPA 3550A

Blank (1608159-BLK1)

Prepared & Analyzed: 08/16/16

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.1 " 12.5 96.6 30-150

LCS (1608159-BS1)

Prepared & Analyzed: 08/16/16

C10-C28 (DRO) 497 50 mg/kg 499 99.6 73-134

Surrogate: o-Terphenyl 12.5 " 12.5 99.8 30-150

Matrix Spike (1608159-MS1)

Source: 1608106-07

Prepared & Analyzed: 08/16/16

C10-C28 (DRO) 587 50 mg/kg 499 353 47.1 50-148 QM-07

Surrogate: o-Terphenyl 12.9 " 12.5 103 30-150

Matrix Spike Dup (1608159-MSD1)

Source: 1608106-07

Prepared & Analyzed: 08/16/16

C10-C28 (DRO) 541 50 mg/kg 499 353 37.8 50-148 8.19 20 QM-07

Surrogate: o-Terphenyl 12.7 " 12.5 101 30-150

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Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

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 1608181 - EPA 5030 Soil MS

Blank (1608181-BLK1)

Prepared & Analyzed: 08/17/16

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Surrogate: 1,2-Dichloroethane-d4	0.0359		"	0.0400		89.7	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		101	21-167			

LCS (1608181-BS1)

Prepared & Analyzed: 08/17/16

Benzene	0.147	0.0020	mg/kg	0.150		97.9	58-130			
Toluene	0.136	0.0050	"	0.150		90.7	61-134			
Ethylbenzene	0.133	0.0050	"	0.150		88.8	74-139			
m,p-Xylene	0.249	0.010	"	0.300		83.0	73-137			
o-Xylene	0.137	0.0050	"	0.150		91.5	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0368		"	0.0400		92.1	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0374		"	0.0400		93.4	21-167			

Matrix Spike (1608181-MS1)

Source: 1608138-01

Prepared: 08/17/16 Analyzed: 08/18/16

Benzene	0.108	0.0020	mg/kg	0.150	ND	72.2	30-131			
Toluene	0.0919	0.0050	"	0.150	ND	61.2	30-134			
Ethylbenzene	0.0586	0.0050	"	0.150	ND	39.1	22-153			
m,p-Xylene	0.104	0.010	"	0.300	ND	34.8	10-159			
o-Xylene	0.0962	0.0050	"	0.150	ND	64.1	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0379		"	0.0400		94.6	23-173			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0400		94.1	21-167			

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Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

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 1608181 - EPA 5030 Soil MS

Matrix Spike Dup (1608181-MSD1)		Source: 1608138-01			Prepared: 08/17/16		Analyzed: 08/18/16			
Benzene	0.110	0.0020	mg/kg	0.150	ND	73.6	30-131	1.87	34	
Toluene	0.0987	0.0050	"	0.150	ND	65.8	30-134	7.18	30	
Ethylbenzene	0.0628	0.0050	"	0.150	ND	41.9	22-153	6.96	24	
m,p-Xylene	0.149	0.010	"	0.300	ND	49.6	10-159	35.2	68	
o-Xylene	0.101	0.0050	"	0.150	ND	67.3	31-151	4.87	38	
Surrogate: 1,2-Dichloroethane-d4	0.0365		"	0.0400		91.2	23-173			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.8	21-167			

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Project: MA-1-3-6H-CB Preset
Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control
Summit Scientific

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

Batch 1608166 - EPA 5030 Soil MS

Blank (1608166-BLK1)

Prepared: 08/16/16 Analyzed: 08/17/16

Acenaphthene	ND	0.00500	mg/kg
Anthracene	ND	0.00500	"
Benzo (a) anthracene	ND	0.00500	"
Benzo (b) fluoranthene	ND	0.00500	"
Benzo (k) fluoranthene	ND	0.00500	"
Benzo (a) pyrene	ND	0.00500	"
Chrysene	ND	0.00500	"
Dibenz (a,h) anthracene	ND	0.00500	"
Fluoranthene	ND	0.00500	"
Fluorene	ND	0.00500	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"
Naphthalene	ND	0.00500	"
Pyrene	ND	0.00500	"

Surrogate: 2-Methylnaphthalene-d10	0.0267		"	0.0331	80.5	30-150
Surrogate: Fluoranthene-d10	0.0294		"	0.0331	88.8	30-150

LCS (1608166-BS1)

Prepared: 08/16/16 Analyzed: 08/17/16

Acenaphthene	0.0274	0.00500	mg/kg	0.0332	82.5	48-131
Anthracene	0.0288	0.00500	"	0.0332	86.5	48-135
Benzo (a) anthracene	0.0307	0.00500	"	0.0332	92.4	37-142
Benzo (b) fluoranthene	0.0349	0.00500	"	0.0332	105	35-139
Benzo (k) fluoranthene	0.0377	0.00500	"	0.0332	113	30-139
Benzo (a) pyrene	0.0345	0.00500	"	0.0332	104	41-132
Chrysene	0.0315	0.00500	"	0.0332	94.9	30-136
Dibenz (a,h) anthracene	0.0374	0.00500	"	0.0332	113	24-127
Fluoranthene	0.0305	0.00500	"	0.0332	91.7	50-139
Fluorene	0.0280	0.00500	"	0.0332	84.2	50-130
Indeno (1,2,3-cd) pyrene	0.0372	0.00500	"	0.0332	112	26-139
Naphthalene	0.0263	0.00500	"	0.0332	79.2	40-135
Pyrene	0.0304	0.00500	"	0.0332	91.4	39-141

Surrogate: 2-Methylnaphthalene-d10	0.0244		"	0.0332	73.3	50-150
Surrogate: Fluoranthene-d10	0.0262		"	0.0332	78.8	50-150

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Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control
Summit Scientific

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

Batch 1608166 - EPA 5030 Soil MS

Matrix Spike (1608166-MS1)				Source: 1608115-01		Prepared: 08/16/16		Analyzed: 08/17/16		
Acenaphthene	0.297	0.00500	mg/kg	0.0331	0.0439	766	27-140			QM-07
Anthracene	0.328	0.00500	"	0.0331	0.0520	834	23-144			QM-07
Benzo (a) anthracene	0.243	0.00500	"	0.0331	ND	735	12-168			QM-07
Benzo (b) fluoranthene	0.464	0.00500	"	0.0331	0.171	886	10-170			QM-07
Benzo (k) fluoranthene	0.127	0.00500	"	0.0331	0.158	NR	11-150			QM-07
Benzo (a) pyrene	0.316	0.00500	"	0.0331	ND	955	11-162			QM-07
Chrysene	0.377	0.00500	"	0.0331	ND	NR	10-167			QM-07
Dibenz (a,h) anthracene	0.101	0.00500	"	0.0331	ND	305	10-128			QM-07
Fluoranthene	0.422	0.00500	"	0.0331	0.0372	NR	18-157			QM-07
Fluorene	0.364	0.00500	"	0.0331	0.0320	1000	37-133			QM-07
Indeno (1,2,3-cd) pyrene	0.473	0.00500	"	0.0331	0.215	780	10-161			QM-07
Naphthalene	0.523	0.00500	"	0.0331	0.143	NR	10-157			QM-07
Pyrene	2.66	0.00500	"	0.0331	0.124	NR	10-166			QM-07
Surrogate: 2-Methylnaphthalene-d10	0.0252		"	0.0331		76.0	50-150			
Surrogate: Fluoranthene-d10	0.0286		"	0.0331		86.3	50-150			

Matrix Spike Dup (1608166-MSD1)				Source: 1608115-01		Prepared: 08/16/16		Analyzed: 08/17/16		
Acenaphthene	0.116	0.00500	mg/kg	0.0330	0.0439	218	27-140	88.0	15	QM-07
Anthracene	0.121	0.00500	"	0.0330	0.0520	210	23-144	92.0	29	QM-07
Benzo (a) anthracene	0.136	0.00500	"	0.0330	ND	412	12-168	56.7	65	QM-07
Benzo (b) fluoranthene	0.198	0.00500	"	0.0330	0.171	81.7	10-170	80.5	18	QM-07
Benzo (k) fluoranthene	0.0500	0.00500	"	0.0330	0.158	NR	11-150	87.2	32	QM-07
Benzo (a) pyrene	0.0967	0.00500	"	0.0330	ND	293	11-162	106	27	QM-07
Chrysene	0.166	0.00500	"	0.0330	ND	503	10-167	77.9	88	QM-07
Dibenz (a,h) anthracene	0.0760	0.00500	"	0.0330	ND	230	10-128	28.3	20	QM-07
Fluoranthene	0.123	0.00500	"	0.0330	0.0372	260	18-157	110	31	QM-07
Fluorene	0.110	0.00500	"	0.0330	0.0320	236	37-133	107	16	QM-07
Indeno (1,2,3-cd) pyrene	0.291	0.00500	"	0.0330	0.215	229	10-161	47.8	22	QM-07
Naphthalene	0.299	0.00500	"	0.0330	0.143	470	10-157	54.7	24	QM-07
Pyrene	1.34	0.00500	"	0.0330	0.124	NR	10-166	66.3	57	QM-07
Surrogate: 2-Methylnaphthalene-d10	0.0335		"	0.0330		102	50-150			
Surrogate: Fluoranthene-d10	0.0146		"	0.0330		44.1	30-150			

Summit Scientific

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

Project: MA-1-3-6H-CB Preset
Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

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

Batch 1608171 - EPA 3050B

Blank (1608171-BLK1)

Prepared & Analyzed: 08/17/16

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.100	"
Chromium	ND	0.500	"
Copper	ND	0.500	"
Lead	ND	0.200	"
Nickel	ND	0.100	"
Selenium	ND	0.400	"
Silver	ND	0.100	"
Zinc	ND	10.0	"

LCS (1608171-BS1)

Prepared & Analyzed: 08/17/16

Arsenic	54.9	0.200	mg/kg wet	52.8	104	82.6-117
Barium	84.9	0.400	"	91.2	93.1	72.8-127
Cadmium	53.4	0.100	"	48.8	109	80.3-120
Chromium	23.1	0.500	"	25.3	91.3	74.7-125
Copper	94.2	0.500	"	84.8	111	85.4-115
Lead	41.0	0.200	"	43.2	94.9	81.1-119
Nickel	126	0.100	"	114	111	88-112
Selenium	38.8	0.400	"	32.2	121	73.7-127
Silver	31.3	0.100	"	29.4	107	69.8-130
Zinc	91.2	10.0	"	81.2	112	77.8-122

Duplicate (1608171-DUP1)

Source: 1608113-16

Prepared & Analyzed: 08/17/16

Arsenic	2.41	0.221	mg/kg dry	2.17	10.2	20
Barium	194	0.442	"	221	12.8	20
Cadmium	0.263	0.111	"	0.305	14.6	20
Chromium	5.31	0.553	"	5.31	0.0187	20
Copper	16.3	0.553	"	16.7	2.93	20
Lead	9.09	0.221	"	10.1	10.2	20
Nickel	20.6	0.111	"	21.5	4.21	20
Selenium	0.353	0.442	"	0.360	1.93	20
Silver	0.0686	0.111	"	0.0784	13.5	20
Zinc	16.0	11.1	"	16.5	3.15	20

Summit Scientific

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

Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

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

Batch 1608171 - EPA 3050B

Matrix Spike (1608171-MS1)		Source: 1608113-16			Prepared & Analyzed: 08/17/16					
Arsenic	20.2	0.221	mg/kg dry	43.6	2.17	41.3	75-125			QM-07
Barium	255	0.442	"	43.6	221	79.4	75-125			
Cadmium	2.75	0.111	"	2.18	0.305	112	75-125			
Chromium	20.8	0.553	"	43.6	5.31	35.6	75-125			QM-07
Copper	69.8	0.553	"	43.6	16.7	122	75-125			
Lead	29.3	0.221	"	21.8	10.1	88.4	75-125			
Nickel	74.8	0.111	"	43.6	21.5	122	75-125			
Selenium	5.10	0.442	"	4.36	0.360	109	75-125			
Silver	2.36	0.111	"	2.18	0.0784	105	75-125			
Zinc	33.3	11.1	"	43.6	16.5	38.6	75-125			QM-07

Matrix Spike Dup (1608171-MSD1)		Source: 1608113-16			Prepared & Analyzed: 08/17/16					
Arsenic	20.5	0.221	mg/kg dry	43.6	2.17	42.0	75-125	1.43	25	QM-07
Barium	245	0.442	"	43.6	221	55.2	75-125	4.22	25	QM-07
Cadmium	2.67	0.111	"	2.18	0.305	108	75-125	3.06	25	
Chromium	21.0	0.553	"	43.6	5.31	36.1	75-125	0.961	25	QM-07
Copper	68.2	0.553	"	43.6	16.7	118	75-125	2.26	25	
Lead	28.0	0.221	"	21.8	10.1	82.2	75-125	4.69	25	
Nickel	73.5	0.111	"	43.6	21.5	119	75-125	1.76	25	
Selenium	4.86	0.442	"	4.36	0.360	103	75-125	4.83	25	
Silver	2.36	0.111	"	2.18	0.0784	105	75-125	0.259	25	
Zinc	32.8	11.1	"	43.6	16.5	37.6	75-125	1.36	25	QM-07

Summit Scientific

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

Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

Total Mercury by EPA Method 7471 - Quality Control
Summit Scientific

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

Batch 1608190 - EPA 7471A

Blank (1608190-BLK1)

Prepared & Analyzed: 08/18/16

Mercury ND 0.0500 mg/kg wet

LCS (1608190-BS1)

Prepared & Analyzed: 08/18/16

Mercury 0.518 0.0500 mg/kg wet 0.500 104 80-120

Duplicate (1608190-DUP1)

Source: 1608121-01

Prepared & Analyzed: 08/18/16

Mercury 0.0442 0.0870 mg/kg dry 0.0499 12.0 20

Matrix Spike (1608190-MS1)

Source: 1608121-01

Prepared & Analyzed: 08/18/16

Mercury 0.883 0.0870 mg/kg dry 0.870 0.0499 95.8 80-120

Matrix Spike Dup (1608190-MSD1)

Source: 1608121-01

Prepared & Analyzed: 08/18/16

Mercury 0.857 0.0870 mg/kg dry 0.836 0.0499 96.5 80-120 3.00 20

Summit Scientific

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

Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

Hexavalent Chromium by EPA 7196 - Quality Control
Summit Scientific

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

Batch 1608169 - 3060A_Mod

Blank (1608169-BLK1)

Prepared: 08/17/16 Analyzed: 08/19/16

Chromium, Hexavalent ND 0.300 mg/kg wet

LCS (1608169-BS1)

Prepared: 08/17/16 Analyzed: 08/19/16

Chromium, Hexavalent 20.7 0.300 mg/kg wet 19.9 104 85-115

Duplicate (1608169-DUP1)

Source: 1608108-04

Prepared: 08/17/16 Analyzed: 08/19/16

Chromium, Hexavalent ND 0.300 mg/kg dry ND 20

Matrix Spike (1608169-MS1)

Source: 1608108-04

Prepared: 08/17/16 Analyzed: 08/19/16

Chromium, Hexavalent 16.8 0.300 mg/kg dry 23.7 ND 71.2 85-115 QM-07

Matrix Spike (1608169-MS2)

Source: 1608145-01

Prepared: 08/17/16 Analyzed: 08/19/16

Chromium, Hexavalent 23.2 0.300 mg/kg dry 25.4 ND 91.5 85-115

Post Spike (1608169-PS1)

Source: 1608108-04

Prepared: 08/17/16 Analyzed: 08/19/16

Chromium, Hexavalent 0.407 mg/kg 0.498 0.00 81.6 85-115 QM-07

Summit Scientific

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

Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

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 1608173 - General Preparation

Blank (1608173-BLK1)

Prepared: 08/17/16 Analyzed: 08/18/16

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

LCS (1608173-BS1)

Prepared: 08/17/16 Analyzed: 08/18/16

Calcium	524	10.0	mg/kg wet	500	105	82.9-118
Magnesium	461	5.00	"	500	92.3	77.1-123
Sodium	444	5.00	"	500	88.7	71-129

Duplicate (1608173-DUP1)

Source: 1608121-01

Prepared: 08/17/16 Analyzed: 08/18/16

Calcium	715	17.4	mg/kg dry	643	10.6	200
Magnesium	289	8.70	"	235	20.6	200
Sodium	1490	8.70	"	1480	0.315	200

Matrix Spike (1608173-MS1)

Source: 1608121-01

Prepared: 08/17/16 Analyzed: 08/18/16

Calcium	1570	17.4	mg/kg dry	870	643	106	75-125
Magnesium	1010	8.70	"	870	235	89.1	75-125
Sodium	2250	8.70	"	870	1480	88.9	75-125

Matrix Spike Dup (1608173-MSD1)

Source: 1608121-01

Prepared: 08/17/16 Analyzed: 08/18/16

Calcium	1690	17.4	mg/kg dry	870	643	120	75-125	7.20	25
Magnesium	1060	8.70	"	870	235	94.7	75-125	4.74	25
Sodium	2250	8.70	"	870	1480	88.7	75-125	0.0873	25

Summit Scientific

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

Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

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 1608164 - General Preparation

LCS (1608164-BS1)

Prepared & Analyzed: 08/16/16

pH	8.01	0.100	pH Units	8.00	100	95-105
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Duplicate (1608164-DUP1)

Source: 1608113-16

Prepared & Analyzed: 08/16/16

pH	8.96	0.100	pH Units	8.95	0.112	20
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Batch 1608165 - General Preparation

Blank (1608165-BLK1)

Prepared & Analyzed: 08/16/16

Specific Conductance (EC)	ND	0.0100	mmhos/cm
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LCS (1608165-BS1)

Prepared & Analyzed: 08/16/16

Specific Conductance (EC)	0.502	0.0100	mmhos/cm	0.500	100	90-110
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Duplicate (1608165-DUP1)

Source: 1608113-16

Prepared & Analyzed: 08/16/16

Specific Conductance (EC)	0.374	0.0100	mmhos/cm	0.381	1.75	20
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Batch 1608172 - General Preparation

Duplicate (1608172-DUP1)

Source: 1608130-01

Prepared: 08/17/16 Analyzed: 08/18/16

% Solids	82.4	%	80.8	1.96	20
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Summit Scientific

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

Project: MA-1-3-6H-CB Preset

Project Number: [none]
Project Manager: Brett Forkner

Reported:
08/22/16 08:02

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

Summit Scientific

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