

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,



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

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Page 1 of 1

Client: LTE Project Manager: BRETT FORKNER
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: TRUDY MALLEN 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							
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Relinquished by: <u>[Signature]</u> Date/Time: <u>8/16/16 09:45</u>	Received by: <u>[Signature]</u> Date/Time: <u>8/16/16 9:45</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



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

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)	11.4				

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.

Nakita
Custodian Printed Name

[Signature]
Signature or initials of Custodian

8/16/16 10:25
Date/Time

[Signature]



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

**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 SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

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

Summit Scientific

Semivolatile Organic Compounds by EPA Method 8270D SIM

Analyte	Result	Reporting 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	"	"	"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

**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	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

**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	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1608159 - EPA 3550A

Blank (1608159-BLK1)

Prepared & Analyzed: 08/16/16

C10-C28 (DRO)	ND	50	mg/kg							
<i>Surrogate: o-Terphenyl</i>	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			
<i>Surrogate: o-Terphenyl</i>	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
<i>Surrogate: o-Terphenyl</i>	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
<i>Surrogate: o-Terphenyl</i>	12.7		"	12.5		101	30-150			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

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 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			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

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 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			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

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

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

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0267		"	0.0331	80.5	30-150				
<i>Surrogate: Fluoranthene-d10</i>	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				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0244		"	0.0332	73.3	50-150				
<i>Surrogate: Fluoranthene-d10</i>	0.0262		"	0.0332	78.8	50-150				

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

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

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

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
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0252</i>		"	<i>0.0331</i>		<i>76.0</i>	<i>50-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0286</i>		"	<i>0.0331</i>		<i>86.3</i>	<i>50-150</i>			

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
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0335</i>		"	<i>0.0330</i>		<i>102</i>	<i>50-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0146</i>		"	<i>0.0330</i>		<i>44.1</i>	<i>30-150</i>			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

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

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

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

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1608164 - General Preparation

LCS (1608164-BS1)					Prepared & Analyzed: 08/16/16					
pH	8.01	0.100	pH Units	8.00	100	95-105				
Duplicate (1608164-DUP1)					Source: 1608113-16 Prepared & Analyzed: 08/16/16					
pH	8.96	0.100	pH Units	8.95	0.112	20				

Batch 1608165 - General Preparation

Blank (1608165-BLK1)					Prepared & Analyzed: 08/16/16					
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (1608165-BS1)					Prepared & Analyzed: 08/16/16					
Specific Conductance (EC)	0.502	0.0100	mmhos/cm	0.500	100	90-110				
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				

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				

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.