

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 25, 2016

Brett Forkner
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: MA-5-7-6H Preset

Enclosed are the results of analyses for samples received by Summit Scientific on 08/19/16 17:20. 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-5-7-6H Preset

Project Number: 065815003
Project Manager: Brett Forkner

Reported:
08/25/16 09:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MA-5-7-6H-CB	1608154-01	Soil	08/19/16 07:00	08/19/16 17:20

Summit Scientific

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

Project: MA-5-7-6H Preset

Project Number: 065815003
Project Manager: Brett Forkner

Reported:
08/25/16 09:23

Summit Scientific 1608154

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: b.forkner@lte.com
City/State/Zip: ARVADA CO
Phone: _____ Fax: _____ Project Name: MA-5-7-6H PRESET
Sampler Name: JILL MAATY Project Number: 065815003.0002

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)	COGCL TABLE				
1	MA-5-7-6H-CB	8/19/16	0720	2			X			X							COGCL TABLE 910-1 MINUS BORO MINUS PAH'S
2																	X
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Relinquished by: <u>B</u>	Date/Time: <u>8/19/16 1610</u>	Received by: <u>MA</u>	Date/Time: <u>8/19/16 1610</u>	Turn Around Time (Check)	Notes:
Relinquished by: <u>MA</u>	Date/Time: <u>8/19/16 1720</u>	Received by:	Date/Time:	Same Day <input type="checkbox"/>	72 hours <input checked="" type="checkbox"/> 24 hours <input type="checkbox"/> 48 hours <input type="checkbox"/> Standard <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>5.1°C</u> Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Relinquished by:	Date/Time:	Received by:	Date/Time:	on ice	

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Reported:
08/25/16 09:23

Sample Receipt Checklist

S2 Work Order: 1608154

Client: LTE Client Project ID: MA-5-7-6H Preset

Shipped Via: DLV (UPS, FedEx, Hand Delivered, Pick-up, etc.) Airbill #: _____

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

Cooler ID					
Temp (°C)	5.1				

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⁾ ?	<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⁾ ?				
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

[Signature]
Signature or Initials of Custodian

8/19/16 1720
Date/Time

[Signature]



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MA-5-7-6H-CB
1608154-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/19/16 07:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1608206	08/19/16	08/19/16	8015M	

Date Sampled: **08/19/16 07:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		97.5 %	70-130		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/19/16 07:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1608205	08/19/16	08/19/16	EPA 8260B	
Toluene	0.0069	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.011	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/19/16 07:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %	21-167		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **08/19/16 07:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.380	0.375	mg/kg dry	1	1608207	08/22/16	08/22/16	EPA 6020A	
Barium	1160	0.750	"	"	"	"	"	"	

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Total Metals by EPA Method 6020 - Dry Weight Basis

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Cadmium	0.344	0.188	mg/kg dry	1	1608207	08/22/16	08/22/16	EPA 6020A	
Chromium	31.1	0.938	"	"	"	"	"	"	
Copper	55.0	0.938	"	"	"	"	"	"	
Lead	11.7	0.375	"	"	"	"	"	"	
Nickel	24.6	0.188	"	"	"	"	"	"	
Selenium	1.03	0.750	"	"	"	"	"	"	
Silver	0.204	0.188	"	"	"	"	"	"	
Zinc	97.1	18.8	"	"	"	"	"	"	

Total Mercury by EPA Method 7471

Date Sampled: 08/19/16 07:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0938	mg/kg dry	1	1608229	08/23/16	08/24/16	EPA 7471	

Hexavalent Chromium by EPA 7196

Date Sampled: 08/19/16 07:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.300	mg/kg dry	1	1608232	08/23/16	08/24/16	EPA 7196	

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

Date Sampled: 08/19/16 07:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1850	18.8	mg/kg dry	1	1608212	08/22/16	08/22/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	743	9.38	"	"	"	"	"	"	
Sodium	1910	9.38	"	"	"	"	"	"	

Date Sampled: 08/19/16 07:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Sodium Adsorption Ratio	9.48	units	1	1608238	08/23/16	08/23/16	EPA 6020/Mod. USDA60 6(2, 3A)
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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/19/16 07:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.97	0.0100	mmhos/cm	1	1608209	08/22/16	08/22/16	SM 2510B	

Date Sampled: **08/19/16 07:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.06	0.100	pH Units	"	1608208	08/22/16	08/22/16	EPA 9045	

Date Sampled: **08/19/16 07:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	53.3		%	"	1608213	08/22/16	08/23/16	% calculation	

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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 1608206 - EPA 3550A

Blank (1608206-BLK1)

Prepared & Analyzed: 08/19/16

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
<i>Surrogate: o-Terphenyl</i>	13.2		"	12.5		106	70-130			

LCS (1608206-BS1)

Prepared & Analyzed: 08/19/16

C10-C28 (DRO)	427	50	mg/kg	499		85.5	50-150			
C28-C36 (ORO)	5.31	50	"				50-150			
<i>Surrogate: o-Terphenyl</i>	12.1		"	12.5		97.2	70-130			

Matrix Spike (1608206-MS1)

Source: 1608155-01

Prepared & Analyzed: 08/19/16

C10-C28 (DRO)	453	50	mg/kg	499	34.1	83.9	50-150			
C28-C36 (ORO)	14.5	50	"		13.4		50-150			
<i>Surrogate: o-Terphenyl</i>	12.5		"	12.5		99.6	70-130			

Matrix Spike Dup (1608206-MSD1)

Source: 1608155-01

Prepared & Analyzed: 08/19/16

C10-C28 (DRO)	457	50	mg/kg	499	34.1	84.7	50-150	0.912	20	
C28-C36 (ORO)	15.2	50	"		13.4		50-150	4.84	20	
<i>Surrogate: o-Terphenyl</i>	12.8		"	12.5		102	70-130			

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Project Number: 065815003
Project Manager: Brett Forkner

Reported:
08/25/16 09:23

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 1608205 - EPA 5030 Soil MS

Blank (1608205-BLK1)

Prepared & Analyzed: 08/19/16

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>0.0376</i>		<i>"</i>	<i>0.0400</i>		<i>93.9</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0412</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>21-167</i>			

LCS (1608205-BS1)

Prepared & Analyzed: 08/19/16

Benzene	0.0963	0.0020	mg/kg	0.100		96.3	58-130			
Toluene	0.104	0.0050	"	0.100		104	61-134			
Ethylbenzene	0.0925	0.0050	"	0.0992		93.2	74-139			
m,p-Xylene	0.177	0.010	"	0.200		88.9	73-137			
o-Xylene	0.0922	0.0050	"	0.0980		94.1	73-141			
Xylenes (total)	0.270	0.0050	"				30-150			
Gasoline Range Hydrocarbons	2.05	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0387</i>		<i>"</i>	<i>0.0400</i>		<i>96.7</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0416</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0379</i>		<i>"</i>	<i>0.0400</i>		<i>94.8</i>	<i>21-167</i>			

Matrix Spike (1608205-MS1)

Source: 1608155-01

Prepared & Analyzed: 08/19/16

Benzene	0.0910	0.0020	mg/kg	0.100	ND	91.0	30-131			
Toluene	0.0953	0.0050	"	0.100	ND	95.3	30-134			
Ethylbenzene	0.0807	0.0050	"	0.0992	ND	81.4	22-153			
m,p-Xylene	0.156	0.010	"	0.200	ND	77.9	10-159			
o-Xylene	0.0802	0.0050	"	0.0980	ND	81.9	31-151			
Xylenes (total)	0.236	0.0050	"		ND		30-150			
Gasoline Range Hydrocarbons	1.76	0.50	"		ND		30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0384</i>		<i>"</i>	<i>0.0400</i>		<i>96.0</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0411</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0388</i>		<i>"</i>	<i>0.0400</i>		<i>97.0</i>	<i>21-167</i>			

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Project: MA-5-7-6H Preset

Project Number: 065815003
 Project Manager: Brett Forkner

Reported:
 08/25/16 09:23

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 1608205 - EPA 5030 Soil MS

Matrix Spike Dup (1608205-MSD1)	Source: 1608155-01			Prepared & Analyzed: 08/19/16						
Benzene	0.0914	0.0020	mg/kg	0.100	ND	91.4	30-131	0.427	34	
Toluene	0.0966	0.0050	"	0.100	ND	96.6	30-134	1.28	30	
Ethylbenzene	0.0807	0.0050	"	0.0992	ND	81.4	22-153	0.0372	24	
m,p-Xylene	0.155	0.010	"	0.200	ND	77.9	10-159	0.0772	68	
o-Xylene	0.0796	0.0050	"	0.0980	ND	81.2	31-151	0.751	38	
Xylenes (total)	0.235	0.0050	"		ND		30-150	0.306	20	
Gasoline Range Hydrocarbons	1.79	0.50	"		ND		30-150	1.56	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0383</i>		<i>"</i>	<i>0.0400</i>		<i>95.8</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>0.0374</i>		<i>"</i>	<i>0.0400</i>		<i>93.5</i>	<i>21-167</i>			

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Project Number: 065815003
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Reported:
08/25/16 09:23

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 1608207 - EPA 3050B

Blank (1608207-BLK1)

Prepared & Analyzed: 08/22/16

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 (1608207-BS1)

Prepared & Analyzed: 08/22/16

Arsenic	111	0.500	mg/kg wet	132	83.9	82.6-117
Barium	218	1.00	"	228	95.7	72.8-127
Cadmium	123	0.250	"	122	101	80.3-120
Chromium	61.9	1.25	"	63.2	98.0	74.7-125
Copper	207	1.25	"	212	97.8	85.4-115
Lead	104	0.500	"	108	96.7	81.1-119
Nickel	278	0.250	"	284	97.8	88-112
Selenium	84.5	1.00	"	80.5	105	73.7-127
Silver	72.6	0.250	"	73.5	98.8	69.8-130
Zinc	199	25.0	"	203	97.8	77.8-122

Duplicate (1608207-DUP1)

Source: 1608154-01

Prepared & Analyzed: 08/22/16

Arsenic	ND	0.375	mg/kg dry	0.380		20
Barium	1120	0.750	"	1160	3.18	20
Cadmium	0.353	0.188	"	0.344	2.72	20
Chromium	32.0	0.938	"	31.1	2.86	20
Copper	56.7	0.938	"	55.0	3.02	20
Lead	12.0	0.375	"	11.7	2.55	20
Nickel	25.0	0.188	"	24.6	1.42	20
Selenium	0.995	0.750	"	1.03	3.77	20
Silver	0.201	0.188	"	0.204	1.24	20
Zinc	111	18.8	"	97.1	13.5	20

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Project Manager: Brett Forkner

Reported:
08/25/16 09:23

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 1608207 - EPA 3050B

Matrix Spike (1608207-MS1)	Source: 1608154-01			Prepared & Analyzed: 08/22/16								
Arsenic	18.9	0.375	mg/kg dry	75.0	0.380	24.6	75-125					QM-07
Barium	1420	0.750	"	75.0	1160	351	75-125					QM-07
Cadmium	4.40	0.188	"	3.75	0.344	108	75-125					
Chromium	112	0.938	"	75.0	31.1	108	75-125					
Copper	137	0.938	"	75.0	55.0	109	75-125					
Lead	48.7	0.375	"	37.5	11.7	98.6	75-125					
Nickel	109	0.188	"	75.0	24.6	113	75-125					
Selenium	10.3	0.750	"	7.50	1.03	124	75-125					
Silver	4.14	0.188	"	3.75	0.204	105	75-125					
Zinc	187	18.8	"	75.0	97.1	120	75-125					

Matrix Spike Dup (1608207-MSD1)	Source: 1608154-01			Prepared & Analyzed: 08/22/16								
Arsenic	17.0	0.375	mg/kg dry	73.9	0.380	22.5	75-125	10.5	25			QM-07
Barium	1380	0.750	"	73.9	1160	299	75-125	3.02	25			QM-07
Cadmium	4.12	0.188	"	3.69	0.344	102	75-125	6.59	25			
Chromium	105	0.938	"	73.9	31.1	100	75-125	6.65	25			
Copper	130	0.938	"	73.9	55.0	101	75-125	5.51	25			
Lead	45.2	0.375	"	36.9	11.7	90.8	75-125	7.42	25			
Nickel	102	0.188	"	73.9	24.6	105	75-125	6.46	25			
Selenium	9.53	0.750	"	7.39	1.03	115	75-125	7.98	25			
Silver	3.80	0.188	"	3.69	0.204	97.3	75-125	8.58	25			
Zinc	197	18.8	"	73.9	97.1	135	75-125	4.95	25			QM-07

Summit Scientific

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

Project: MA-5-7-6H Preset

Project Number: 065815003
Project Manager: Brett Forkner

Reported:
08/25/16 09:23

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 1608229 - EPA 7471A

Blank (1608229-BLK1)		Prepared: 08/23/16 Analyzed: 08/24/16								
Mercury	ND	0.0500	mg/kg wet							
LCS (1608229-BS1)		Prepared: 08/23/16 Analyzed: 08/24/16								
Mercury	0.499	0.0500	mg/kg wet	0.500		99.7	80-120			
Duplicate (1608229-DUP1)		Source: 1608155-01		Prepared: 08/23/16 Analyzed: 08/24/16						
Mercury	0.0330	0.0556	mg/kg dry		0.0301			9.37	20	
Matrix Spike (1608229-MS1)		Source: 1608155-01		Prepared: 08/23/16 Analyzed: 08/24/16						
Mercury	0.532	0.0556	mg/kg dry	0.515	0.0301	97.4	80-120			
Matrix Spike Dup (1608229-MSD1)		Source: 1608155-01		Prepared: 08/23/16 Analyzed: 08/24/16						
Mercury	0.572	0.0556	mg/kg dry	0.545	0.0301	99.4	80-120	7.33	20	

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Project Manager: Brett Forkner

Reported:
08/25/16 09:23

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 1608232 - 3060A_Mod

Blank (1608232-BLK1)			Prepared: 08/23/16 Analyzed: 08/24/16								
Chromium, Hexavalent	ND	0.300	mg/kg wet								
LCS (1608232-BS1)			Prepared: 08/23/16 Analyzed: 08/24/16								
Chromium, Hexavalent	20.4	0.300	mg/kg wet	19.9		103	85-115				
Duplicate (1608232-DUP1)			Source: 1608155-01			Prepared: 08/23/16 Analyzed: 08/24/16					
Chromium, Hexavalent	ND	0.300	mg/kg dry		ND					20	
Matrix Spike (1608232-MS1)			Source: 1608155-01			Prepared: 08/23/16 Analyzed: 08/24/16					
Chromium, Hexavalent	1.56	0.300	mg/kg dry	22.2	ND	7.02	85-115				QM-07
Post Spike (1608232-PS1)			Source: 1608155-01			Prepared: 08/23/16 Analyzed: 08/24/16					
Chromium, Hexavalent	0.247		mg/kg	0.498	0.00	49.5	85-115				QM-07

Summit Scientific

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Project Manager: Brett Forkner

Reported:
08/25/16 09:23

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 1608212 - General Preparation

Blank (1608212-BLK1)

Prepared & Analyzed: 08/22/16

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

LCS (1608212-BS1)

Prepared & Analyzed: 08/22/16

Calcium	503	10.0	mg/kg wet	500	101	82.9-118				
Magnesium	517	5.00	"	500	103	77.1-123				
Sodium	526	5.00	"	500	105	71-129				

Duplicate (1608212-DUP1)

Source: 1608154-01

Prepared & Analyzed: 08/22/16

Calcium	2100	18.8	mg/kg dry	1850			12.9	200		
Magnesium	786	9.38	"	743			5.67	200		
Sodium	2010	9.38	"	1910			5.45	200		

Matrix Spike (1608212-MS1)

Source: 1608154-01

Prepared & Analyzed: 08/22/16

Calcium	2720	18.8	mg/kg dry	938	1850	92.9	75-125			
Magnesium	1540	9.38	"	938	743	84.7	75-125			
Sodium	2730	9.38	"	938	1910	88.0	75-125			

Matrix Spike Dup (1608212-MSD1)

Source: 1608154-01

Prepared & Analyzed: 08/22/16

Calcium	2670	18.8	mg/kg dry	938	1850	87.3	75-125	1.97	25	
Magnesium	1570	9.38	"	938	743	88.7	75-125	2.41	25	
Sodium	2800	9.38	"	938	1910	95.1	75-125	2.40	25	

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Project: MA-5-7-6H Preset

Project Number: 065815003
Project Manager: Brett Forkner

Reported:
08/25/16 09:23

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 1608208 - General Preparation

LCS (1608208-BS1)					Prepared & Analyzed: 08/22/16					
pH	6.04	0.100	pH Units	8.00	75.5	95-105				
Duplicate (1608208-DUP1)					Source: 1608154-01 Prepared & Analyzed: 08/22/16					
pH	8.91	0.100	pH Units	9.06	1.67	20				

Batch 1608209 - General Preparation

Blank (1608209-BLK1)					Prepared & Analyzed: 08/22/16					
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (1608209-BS1)					Prepared & Analyzed: 08/22/16					
Specific Conductance (EC)	0.508	0.0100	mmhos/cm	0.500	102	90-110				
Duplicate (1608209-DUP1)					Source: 1608154-01 Prepared & Analyzed: 08/22/16					
Specific Conductance (EC)	2.61	0.0100	mmhos/cm	2.97	12.7	20				

Batch 1608213 - General Preparation

Duplicate (1608213-DUP1)					Source: 1608154-01 Prepared: 08/22/16 Analyzed: 08/23/16					
% Solids	54.0		%	53.3	1.30	20				

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Project: MA-5-7-6H Preset

Project Number: 065815003
Project Manager: Brett Forkner

Reported:
08/25/16 09:23

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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