Maxxam

Your C.O.C. #: A133617

Attention: STEPHEN LEGAREE
Alberta Urban Garden
www.albertaurbangarden.ca

Report Date: 2015/01/14
Report #: R1787644
Version: 10R

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B4A9530
Received: 2014/12/02, 15:13

Sample Matrix: Soil
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by ICP -Soils	7	2014/12/10	2014/12/10	AB SOP-00001 / AB SOP-00042	EPA 200.7 CFR 2012 m
Elements by ICPMS - Soils	7	2014/12/10	2014/12/10	AB SOP-00001 / AB SOP-00043	EPA 200.8 R5.4 m
Moisture	7	N/A	2014/12/09	AB SOP-00002	CCME PHC-CWS
Ammonia-N (Available)	7	2014/12/31	2014/12/31	AB SOP-00027 / AB SOP-00007	EPA 350.1 R2.0 m
NO2 + NO3 Available (10:1 Wet)	7	2014/12/02	2014/12/10	AB SOP-00027/AB SOP-00023	Auto Calc
Nitrite Available (10:1 Wet)	7	2014/12/09	2014/12/09	AB SOP-00027/AB SOP-00023	SM 22 4110 B m
Nitrogen - Nitrate (as N)	7	N/A	2014/12/10	AB SOP-00023	SM 4110 B
Nitrate Available (10:1 Wet)	7	2014/12/09	2014/12/09	AB SOP-00027/AB SOP-00023	SM 22 4110 B m
pH @25C (1:2 Calcium Chloride Extract)	6	2015/01/14	2015/01/14	AB SOP-00033 / AB SOP-00006	Carter 2nd ed 16.2 m
Phosphorus, Potassium - Available	7	2014/12/09	2014/12/10	AB SOP-00028 / AB SOP-00042	EPA 200.7 CFR 2012 m
Sulphur (Available)	7	2014/12/09	2014/12/09	AB SOP-00029 / AB SOP-00042	EPA 200.7 CFR 2012 m

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

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CERTIFICATE OF ANALYSIS – REVISED REPORT

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Encryption Key

Jeremy Wakaruk

14 Jan 2015 15:33:01 -07:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Jeremy Wakaruk, B.Sc., Senior Project Manager
Email: JWakaruk@maxxam.ca
Phone# (780) 577-7105 Ext:7105

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Job #: B4A9530
Report Date: 2015/01/14

Alberta Urban Garden

ASSESSMENT ICP METALS (SOIL)

Maxxam ID		LH1343		LH1344	LH1345		LH1346	LH1347		
Sampling Date										
COC Number		A133617		A133617	A133617		A133617	A133617		
	UNITS	**COMFREY FALL**	**RDL**	**ROCK DUST A**	**ROCK DUST B**	**RDL**	**LEAVES**	**INITIAL SAMPLE COMPOST**	**RDL**	**QC Batch**
Elements										
Total Aluminum (Al)	mg/kg	68	20	8000	22000	10	210	95	20	7749156
Total Boron (B)	mg/kg	58	4.0	12	4.3	2.0	65	31	4.0	7749156
Total Calcium (Ca)	mg/kg	20000	100	14000	11000	50	18000	8600	100	7749156
Total Iron (Fe)	mg/kg	200	20	7800	43000	10	440	230	20	7749156
Total Lithium (Li)	mg/kg	<20	20	18	16	10	<20	<20	20	7749156
Total Magnesium (Mg)	mg/kg	3300	40	3500	13000	20	3300	2600	40	7749156
Total Manganese (Mn)	mg/kg	91	20	380	970	10	130	80	20	7749156
Total Phosphorus (P)	mg/kg	5300	40	170	830	20	990	1300	40	7749156
Total Potassium (K)	mg/kg	70000	50	4400	2300	25	7900	7100	50	7749156
Total Sodium (Na)	mg/kg	1600	100	1300	1100	50	<100	<100	100	7749156
Total Strontium (Sr)	mg/kg	74	20	62	79	10	84	44	20	7749156
Total Sulphur (S)	mg/kg	2300	40	47	220	20	1100	1200	40	7749156
Total Antimony (Sb)	mg/kg	<2.0	2.0	<1.0	13	1.0	<2.0	<2.0	2.0	7749159
Total Arsenic (As)	mg/kg	<2.0	2.0	1.4	16	1.0	<2.0	<2.0	2.0	7749159
Total Barium (Ba)	mg/kg	90	20	250	230	10	64	32	20	7749159
Total Beryllium (Be)	mg/kg	<0.80	0.80	0.44	0.43	0.40	<0.80	<0.80	0.80	7749159
Total Cadmium (Cd)	mg/kg	<0.20	0.20	<0.10	0.69	0.10	<0.20	<0.20	0.20	7749159
Total Chromium (Cr)	mg/kg	<2.0	2.0	8.1	55	1.0	<2.0	<2.0	2.0	7749159
Total Cobalt (Co)	mg/kg	<2.0	2.0	1.3	19	1.0	<2.0	<2.0	2.0	7749159
Total Copper (Cu)	mg/kg	<10	10	<5.0	220	5.0	<10	14	10	7749159
Total Lead (Pb)	mg/kg	<2.0	2.0	8.6	41	1.0	<2.0	<2.0	2.0	7749159
Total Molybdenum (Mo)	mg/kg	1.8	0.80	0.91	3.2	0.40	<0.80	<0.80	0.80	7749159
Total Nickel (Ni)	mg/kg	6.2	2.0	1.7	60	1.0	3.6	2.5	2.0	7749159
Total Selenium (Se)	mg/kg	<1.0	1.0	<0.50	<0.50	0.50	<1.0	<1.0	1.0	7749159
Total Silver (Ag)	mg/kg	<2.0	2.0	<1.0	<1.0	1.0	<2.0	<2.0	2.0	7749159
Total Thallium (Tl)	mg/kg	<0.60	0.60	<0.30	<0.30	0.30	<0.60	<0.60	0.60	7749159
Total Tin (Sn)	mg/kg	<2.0	2.0	1.0	11	1.0	<2.0	<2.0	2.0	7749159
Total Uranium (U)	mg/kg	<2.0	2.0	<1.0	<1.0	1.0	<2.0	<2.0	2.0	7749159
Total Vanadium (V)	mg/kg	<2.0	2.0	10	83	1.0	<2.0	<2.0	2.0	7749159
Total Zinc (Zn)	mg/kg	29	20	11	340	10	74	34	20	7749159

RDL = Reportable Detection Limit

Maxxam Job #: B4A9530
Report Date: 2015/01/14

Alberta Urban Garden

ASSESSMENT ICP METALS (SOIL)

Maxxam ID		LH1348	LH1349		
Sampling Date					
COC Number		A133617	A133617		
	UNITS	**BIOCHAR UNCHARGED**	**USED COFFEE GROUNDS**	**RDL**	**QC Batch**
Elements					
Total Aluminum (Al)	mg/kg	1600	21	20	7749156
Total Boron (B)	mg/kg	27	6.3	4.0	7749156
Total Calcium (Ca)	mg/kg	15000	1100	100	7749156
Total Iron (Fe)	mg/kg	1100	70	20	7749156
Total Lithium (Li)	mg/kg	<20	<20	20	7749156
Total Magnesium (Mg)	mg/kg	2800	1700	40	7749156
Total Manganese (Mn)	mg/kg	390	33	20	7749156
Total Phosphorus (P)	mg/kg	1300	1300	40	7749156
Total Potassium (K)	mg/kg	6200	6200	50	7749156
Total Sodium (Na)	mg/kg	1300	<100	100	7749156
Total Strontium (Sr)	mg/kg	77	<20	20	7749156
Total Sulphur (S)	mg/kg	950	1200	40	7749156
Total Antimony (Sb)	mg/kg	<2.0	<2.0	2.0	7749159
Total Arsenic (As)	mg/kg	<2.0	<2.0	2.0	7749159
Total Barium (Ba)	mg/kg	110	<20	20	7749159
Total Beryllium (Be)	mg/kg	<0.80	<0.80	0.80	7749159
Total Cadmium (Cd)	mg/kg	<0.20	<0.20	0.20	7749159
Total Chromium (Cr)	mg/kg	3.4	<2.0	2.0	7749159
Total Cobalt (Co)	mg/kg	<2.0	<2.0	2.0	7749159
Total Copper (Cu)	mg/kg	11	17	10	7749159
Total Lead (Pb)	mg/kg	<2.0	<2.0	2.0	7749159
Total Molybdenum (Mo)	mg/kg	<0.80	<0.80	0.80	7749159
Total Nickel (Ni)	mg/kg	2.3	<2.0	2.0	7749159
Total Selenium (Se)	mg/kg	<1.0	<1.0	1.0	7749159
Total Silver (Ag)	mg/kg	<2.0	<2.0	2.0	7749159
Total Thallium (Tl)	mg/kg	<0.60	<0.60	0.60	7749159
Total Tin (Sn)	mg/kg	4.6	<2.0	2.0	7749159
Total Uranium (U)	mg/kg	<2.0	<2.0	2.0	7749159
Total Vanadium (V)	mg/kg	<2.0	<2.0	2.0	7749159
Total Zinc (Zn)	mg/kg	<20	<20	20	7749159

RDL = Reportable Detection Limit

Maxxam Job #: B4A9530
Report Date: 2015/01/14

Alberta Urban Garden

NUTRIENT PACKAGE 2 (SOIL)

Maxxam ID		LH1343		LH1344	LH1345		LH1346		
Sampling Date									
COC Number		A133617		A133617	A133617		A133617		
	UNITS	**COMFREY FALL**	**RDL**	**ROCK DUST A**	**ROCK DUST B**	**RDL**	**LEAVES**	**RDL**	**QC Batch**
Calculated Parameters									
Available (KCl) Nitrate (N)	mg/kg	3300	25	10	1.0	0.50	29	0.50	7740266
Nutrients									
Available (KCl) Nitrate plus Nitrite (N)	mg/kg	3300	25	11	1.6	0.50	38	0.50	7740265
Available (KCl) Nitrite (N)	mg/kg	7.8	0.50	0.75	0.53	0.50	9.7	0.50	7747931
Available (Mod Kel) Phosphorus (P)	mg/kg	3200 (1)	100	<4.0	11	4.0	410 (2)	10	7748032
Available (Mod Kel) Potassium (K)	mg/kg	61000 (1)	100	1400	110	4.0	5900 (2)	10	7748032
Available (CaCl2) Sulphur (S)	mg/kg	770 (1)	200	12	58	2.0	490 (1)	200	7748140
Physical Properties									
Moisture	%	9.0	0.30	2.6	1.0	0.30	11	0.30	7747259

RDL = Reportable Detection Limit
(1) Detection limits raised based on sample matrix and sample weight used for analysis.
(2) Detection limits raised based on sample weight used for analysis.

Maxxam ID		LH1347	LH1348		LH1349		
Sampling Date							
COC Number		A133617	A133617		A133617		
	UNITS	**INITIAL SAMPLE COMPOST**	**BIOCHAR UNCHARGED**	**RDL**	**USED COFFEE GROUNDS**	**RDL**	**QC Batch**
Calculated Parameters							
Available (KCl) Nitrate (N)	mg/kg	<0.50	8.1	0.50	<0.50	0.50	7740266
Nutrients							
Available (KCl) Nitrate plus Nitrite (N)	mg/kg	4.2	10	0.50	<0.50	0.50	7740265
Available (KCl) Nitrite (N)	mg/kg	4.1	2.2	0.50	<0.50	0.50	7747931
Available (Mod Kel) Phosphorus (P)	mg/kg	680 (1)	420 (1)	10	770 (1)	10	7748032
Available (Mod Kel) Potassium (K)	mg/kg	5500 (1)	4600 (1)	10	4300 (1)	10	7748032
Available (CaCl2) Sulphur (S)	mg/kg	22 (1)	610 (1)	20	<200 (2)	200	7748140
Physical Properties							
Moisture	%	53	54	0.30	65	0.30	7747259

RDL = Reportable Detection Limit
(1) Detection limits raised based on sample weight used for analysis.
(2) Detection limits raised based on sample matrix and sample weight used for analysis.

Maxxam Job #: B4A9530
Report Date: 2015/01/14

Alberta Urban Garden

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		LH1343		LH1344	LH1345			LH1346		
Sampling Date										
COC Number		A133617		A133617	A133617			A133617		
	UNITS	**COMFREY FALL**	**RDL**	**ROCK DUST A**	**ROCK DUST B**	**RDL**	**QC Batch**	**LEAVES**	**RDL**	**QC Batch**
Nutrients										
Available (KCl) Ammonia (N)	mg/kg	200 (1)	20	3.9	8.0	2.0	7767989	130 (1)	20	7767989
Available (KCl) Nitrate (N)	mg/kg	3300 (1)	25	10	1.0	0.50	7747932	29	0.50	7747932
Soluble Parameters										
Soluble (CaCl2) pH	pH	N/A	N/A	7.87	7.80	N/A	7777314	5.08	N/A	7777281

N/A = Not Applicable
RDL = Reportable Detection Limit
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

Maxxam ID		LH1347		LH1348			LH1349		
Sampling Date									
COC Number		A133617		A133617			A133617		
	UNITS	**INITIAL SAMPLE COMPOST**	**RDL**	**BIOCHAR UNCHARGED**	**RDL**	**QC Batch**	**USED COFFEE GROUNDS**	**RDL**	**QC Batch**
Nutrients									
Available (KCl) Ammonia (N)	mg/kg	<20 (1)	20	<2.0	2.0	7767989	31 (1)	20	7767989
Available (KCl) Nitrate (N)	mg/kg	<0.50	0.50	8.1	0.50	7747932	<0.50	0.50	7747932
Soluble Parameters									
Soluble (CaCl2) pH	pH	6.07	N/A	8.35	N/A	7777314	5.26	N/A	7777281

RDL = Reportable Detection Limit
(1) Detection limits raised due to sample matrix.

Package 1	15.3°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Sample LH1343-01: Detection limits raised based on sample weight used for analysis. Parameters affected are Al, B, Ca, Fe, K, Li, Mg, Mn, Na, P, S, Sr, Cr, Co, Cu, Pb, Sb, Mo, Ni, Se, Ag, As, Tl, Sn, U, V, Zn, Be, Cd, Ba.

Sample LH1346-01: Detection limits raised based on sample weight used for analysis. Parameters affected are Al, B, Ca, Fe, K, Li, Mg, Mn, Na, P, S, Sr, Cr, Co, Cu, Pb, Sb, Mo, Ni, Se, Ag, As, Tl, Sn, U, V, Zn, Be, Cd, Ba.

Sample LH1347-01: Detection limits raised based on sample weight used for analysis. Parameters affected are Al, B, Ca, Fe, K, Li, Mg, Mn, Na, P, S, Sr, Cr, Co, Cu, Pb, Sb, Mo, Ni, Se, Ag, As, Tl, Sn, U, V, Zn, Be, Cd, Ba.

Sample LH1348-01: Detection limits raised based on sample weight used for analysis. Parameters affected are Al, B, Ca, Fe, K, Li, Mg, Mn, Na, P, S, Sr, Cr, Co, Cu, Pb, Sb, Mo, Ni, Se, Ag, As, Tl, Sn, U, V, Zn, Be, Cd, Ba.

Sample LH1349-01: Detection limits raised based on sample weight used for analysis. Parameters affected are Al, B, Ca, Fe, K, Li, Mg, Mn, Na, P, S, Sr, Cr, Co, Cu, Pb, Sb, Mo, Ni, Se, Ag, As, Tl, Sn, U, V, Zn, Be, Cd, Ba.

Results relate only to the items tested.

Maxxam

Alberta Urban Garden
Attention: STEPHEN LEGAREE
Client Project #:
P.O. #:
Site Location:

Quality Assurance Report

Maxxam Job Number: EB4A9530

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	UNITS	QC Limits
7747259 HP5	Method Blank	Moisture	2014/12/09	<0.30		%	
	RPD	Moisture	2014/12/09	0.6		%	20
7747931 LMD	Matrix Spike						
	[LH1345-01]	Available (KCl) Nitrite (N)	2014/12/09		96	%	75 - 125
	Spiked Blank	Available (KCl) Nitrite (N)	2014/12/09		97	%	75 - 125
	Method Blank	Available (KCl) Nitrite (N)	2014/12/09	<0.50		mg/kg	
	RPD [LH1345-01]	Available (KCl) Nitrite (N)	2014/12/09	NC		%	35
7747932 LMD	Matrix Spike						
	[LH1345-01]	Available (KCl) Nitrate (N)	2014/12/09		101	%	75 - 125
	Spiked Blank	Available (KCl) Nitrate (N)	2014/12/09		99	%	75 - 125
	Method Blank	Available (KCl) Nitrate (N)	2014/12/09	<0.50		mg/kg	
	RPD [LH1345-01]	Available (KCl) Nitrate (N)	2014/12/09	NC		%	35
7748032 SDH	Spiked Blank	Available (Mod Kel) Phosphorus (P)	2014/12/10		99	%	75 - 125
		Available (Mod Kel) Potassium (K)	2014/12/10		90	%	75 - 125
	Method Blank	Available (Mod Kel) Phosphorus (P)	2014/12/10	<4.0		mg/kg	
		Available (Mod Kel) Potassium (K)	2014/12/10	<4.0		mg/kg	
	RPD [LH1345-01]	Available (Mod Kel) Phosphorus (P)	2014/12/10	NC		%	35
		Available (Mod Kel) Potassium (K)	2014/12/10	26.8		%	35
7748140 JK9	QC Standard	Available (CaCl2) Sulphur (S)	2014/12/09		92	%	88 - 112
	Spiked Blank	Available (CaCl2) Sulphur (S)	2014/12/09		93	%	80 - 120
	Method Blank	Available (CaCl2) Sulphur (S)	2014/12/09	<2.0		mg/kg	
	RPD [LH1345-01]	Available (CaCl2) Sulphur (S)	2014/12/09	17.7		%	35
7749156 SDH	Matrix Spike						
	[LH1345-01]	Total Aluminum (Al)	2014/12/10		NC	%	75 - 125
		Total Boron (B)	2014/12/10		99	%	75 - 125
		Total Calcium (Ca)	2014/12/10		NC	%	75 - 125
		Total Iron (Fe)	2014/12/10		NC	%	75 - 125
		Total Lithium (Li)	2014/12/10		112	%	75 - 125
		Total Magnesium (Mg)	2014/12/10		NC	%	75 - 125
		Total Manganese (Mn)	2014/12/10		NC	%	75 - 125
		Total Phosphorus (P)	2014/12/10		NC	%	75 - 125
		Total Potassium (K)	2014/12/10		NC	%	75 - 125
		Total Sodium (Na)	2014/12/10		NC	%	75 - 125
		Total Strontium (Sr)	2014/12/10		NC	%	75 - 125
	QC Standard	Total Aluminum (Al)	2014/12/10		99	%	75 - 125
		Total Calcium (Ca)	2014/12/10		107	%	75 - 125
		Total Iron (Fe)	2014/12/10		119	%	75 - 125
		Total Lithium (Li)	2014/12/10		105	%	75 - 125
		Total Magnesium (Mg)	2014/12/10		116	%	75 - 125
		Total Manganese (Mn)	2014/12/10		110	%	75 - 125
		Total Phosphorus (P)	2014/12/10		109	%	75 - 125
		Total Potassium (K)	2014/12/10		103	%	75 - 125
		Total Sodium (Na)	2014/12/10		117	%	75 - 125
		Total Strontium (Sr)	2014/12/10		106	%	75 - 125
	Spiked Blank	Total Aluminum (Al)	2014/12/10		92	%	75 - 125
		Total Boron (B)	2014/12/10		94	%	75 - 125
		Total Calcium (Ca)	2014/12/10		86	%	75 - 125
		Total Iron (Fe)	2014/12/10		98	%	75 - 125
		Total Lithium (Li)	2014/12/10		101	%	75 - 125
		Total Magnesium (Mg)	2014/12/10		96	%	75 - 125
		Total Manganese (Mn)	2014/12/10		90	%	75 - 125
		Total Phosphorus (P)	2014/12/10		93	%	75 - 125
		Total Potassium (K)	2014/12/10		103	%	75 - 125
		Total Sodium (Na)	2014/12/10		106	%	75 - 125
		Total Strontium (Sr)	2014/12/10		95	%	75 - 125

Maxxam

Alberta Urban Garden
Attention: STEPHEN LEGAREE
Client Project #:
P.O. #:
Site Location:

Quality Assurance Report (Continued)

Maxxam Job Number: EB4A9530

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	UNITS	QC Limits
7749156 SDH	Spiked Blank	Total Sulphur (S)	2014/12/10		96	%	75 - 125
	Method Blank	Total Aluminum (Al)	2014/12/10	<10		mg/kg	
		Total Boron (B)	2014/12/10	<2.0		mg/kg	
		Total Calcium (Ca)	2014/12/10	<50		mg/kg	
		Total Iron (Fe)	2014/12/10	<10		mg/kg	
		Total Lithium (Li)	2014/12/10	<10		mg/kg	
		Total Magnesium (Mg)	2014/12/10	<20		mg/kg	
		Total Manganese (Mn)	2014/12/10	<10		mg/kg	
		Total Phosphorus (P)	2014/12/10	<20		mg/kg	
		Total Potassium (K)	2014/12/10	<25		mg/kg	
		Total Sodium (Na)	2014/12/10	<50		mg/kg	
		Total Strontium (Sr)	2014/12/10	<10		mg/kg	
		Total Sulphur (S)	2014/12/10	<20		mg/kg	
	RPD [LH1345-01]	Total Aluminum (Al)	2014/12/10	5.0		%	35
		Total Boron (B)	2014/12/10	NC		%	35
		Total Calcium (Ca)	2014/12/10	5.1		%	35
		Total Iron (Fe)	2014/12/10	5.4		%	35
		Total Lithium (Li)	2014/12/10	NC		%	35
		Total Magnesium (Mg)	2014/12/10	5.6		%	35
		Total Manganese (Mn)	2014/12/10	4.2		%	35
		Total Phosphorus (P)	2014/12/10	3.2		%	35
		Total Potassium (K)	2014/12/10	3.2		%	35
		Total Sodium (Na)	2014/12/10	4.6		%	35
		Total Strontium (Sr)	2014/12/10	5.4		%	35
		Total Sulphur (S)	2014/12/10	3.0		%	35
7749159 APY	Matrix Spike [LH1345-01]	Total Antimony (Sb)	2014/12/10		91	%	75 - 125
		Total Arsenic (As)	2014/12/10		98	%	75 - 125
		Total Barium (Ba)	2014/12/10		NC	%	75 - 125
		Total Beryllium (Be)	2014/12/10		102	%	75 - 125
		Total Cadmium (Cd)	2014/12/10		99	%	75 - 125
		Total Chromium (Cr)	2014/12/10		NC	%	75 - 125
		Total Cobalt (Co)	2014/12/10		96	%	75 - 125
		Total Copper (Cu)	2014/12/10		NC	%	75 - 125
		Total Lead (Pb)	2014/12/10		NC	%	75 - 125
		Total Molybdenum (Mo)	2014/12/10		102	%	75 - 125
		Total Nickel (Ni)	2014/12/10		NC	%	75 - 125
		Total Selenium (Se)	2014/12/10		96	%	75 - 125
		Total Silver (Ag)	2014/12/10		98	%	75 - 125
		Total Thallium (Tl)	2014/12/10		96	%	75 - 125
		Total Tin (Sn)	2014/12/10		109	%	75 - 125
		Total Uranium (U)	2014/12/10		93	%	75 - 125
		Total Vanadium (V)	2014/12/10		NC	%	75 - 125
		Total Zinc (Zn)	2014/12/10		NC	%	75 - 125
	QC Standard	Total Arsenic (As)	2014/12/10		113	%	50 - 150
		Total Barium (Ba)	2014/12/10		106	%	69 - 131
		Total Chromium (Cr)	2014/12/10		101	%	41 - 159
		Total Cobalt (Co)	2014/12/10		100	%	75 - 125
		Total Copper (Cu)	2014/12/10		99	%	73 - 127
		Total Lead (Pb)	2014/12/10		99	%	54 - 146
		Total Nickel (Ni)	2014/12/10		109	%	61 - 139
		Total Vanadium (V)	2014/12/10		115	%	50 - 150
		Total Zinc (Zn)	2014/12/10		107	%	72 - 128
	Spiked Blank	Total Antimony (Sb)	2014/12/10		97	%	75 - 125
		Total Arsenic (As)	2014/12/10		95	%	75 - 125

Maxxam

Alberta Urban Garden
Attention: STEPHEN LEGAREE
Client Project #:
P.O. #:
Site Location:

Quality Assurance Report (Continued)

Maxxam Job Number: EB4A9530

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	UNITS	QC Limits
7749159 APY	Spiked Blank	Total Barium (Ba)	2014/12/10		96	%	75 - 125
		Total Beryllium (Be)	2014/12/10		96	%	75 - 125
		Total Cadmium (Cd)	2014/12/10		96	%	75 - 125
		Total Chromium (Cr)	2014/12/10		92	%	75 - 125
		Total Cobalt (Co)	2014/12/10		93	%	75 - 125
		Total Copper (Cu)	2014/12/10		91	%	75 - 125
		Total Lead (Pb)	2014/12/10		89	%	75 - 125
		Total Molybdenum (Mo)	2014/12/10		96	%	75 - 125
		Total Nickel (Ni)	2014/12/10		92	%	75 - 125
		Total Selenium (Se)	2014/12/10		95	%	75 - 125
		Total Silver (Ag)	2014/12/10		96	%	75 - 125
		Total Thallium (Tl)	2014/12/10		95	%	75 - 125
		Total Tin (Sn)	2014/12/10		104	%	75 - 125
		Total Uranium (U)	2014/12/10		93	%	75 - 125
		Total Vanadium (V)	2014/12/10		96	%	75 - 125
		Total Zinc (Zn)	2014/12/10		93	%	75 - 125
	Method Blank	Total Antimony (Sb)	2014/12/10	<1.0		mg/kg	
		Total Arsenic (As)	2014/12/10	<1.0		mg/kg	
		Total Barium (Ba)	2014/12/10	<10		mg/kg	
		Total Beryllium (Be)	2014/12/10	<0.40		mg/kg	
		Total Cadmium (Cd)	2014/12/10	<0.10		mg/kg	
		Total Chromium (Cr)	2014/12/10	<1.0		mg/kg	
		Total Cobalt (Co)	2014/12/10	<1.0		mg/kg	
		Total Copper (Cu)	2014/12/10	<5.0		mg/kg	
		Total Lead (Pb)	2014/12/10	<1.0		mg/kg	
		Total Molybdenum (Mo)	2014/12/10	<0.40		mg/kg	
		Total Nickel (Ni)	2014/12/10	<1.0		mg/kg	
		Total Selenium (Se)	2014/12/10	<0.50		mg/kg	
		Total Silver (Ag)	2014/12/10	<1.0		mg/kg	
		Total Thallium (Tl)	2014/12/10	<0.30		mg/kg	
		Total Tin (Sn)	2014/12/10	<1.0		mg/kg	
		Total Uranium (U)	2014/12/10	<1.0		mg/kg	
		Total Vanadium (V)	2014/12/10	<1.0		mg/kg	
		Total Zinc (Zn)	2014/12/10	<10		mg/kg	
	RPD [LH1345-01]	Total Antimony (Sb)	2014/12/10	3.7		%	35
		Total Arsenic (As)	2014/12/10	7.0		%	35
		Total Barium (Ba)	2014/12/10	4.3		%	35
		Total Beryllium (Be)	2014/12/10	NC		%	35
		Total Cadmium (Cd)	2014/12/10	6.9		%	35
		Total Chromium (Cr)	2014/12/10	4.8		%	35
		Total Cobalt (Co)	2014/12/10	4.7		%	35
		Total Copper (Cu)	2014/12/10	4.5		%	35
		Total Lead (Pb)	2014/12/10	1.9		%	35
		Total Molybdenum (Mo)	2014/12/10	4.0		%	35
		Total Nickel (Ni)	2014/12/10	5.1		%	35
		Total Selenium (Se)	2014/12/10	NC		%	35
		Total Silver (Ag)	2014/12/10	NC		%	35
		Total Thallium (Tl)	2014/12/10	NC		%	35
		Total Tin (Sn)	2014/12/10	3.3		%	35
		Total Uranium (U)	2014/12/10	NC		%	35
		Total Vanadium (V)	2014/12/10	5.3		%	35
		Total Zinc (Zn)	2014/12/10	3.5		%	35
7767989 AL2	Matrix Spike	Available (KCl) Ammonia (N)	2014/12/31		87	%	75 - 125
	Spiked Blank	Available (KCl) Ammonia (N)	2014/12/31		95	%	80 - 120
	Method Blank	Available (KCl) Ammonia (N)	2014/12/31	<2.0		mg/kg	

Alberta Urban Garden
Attention: STEPHEN LEGAREE
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Quality Assurance Report (Continued)

Maxxam Job Number: EB4A9530

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	UNITS	QC Limits
7767989	AL2	RPD	Available (KCl) Ammonia (N)	2014/12/31	NC		%	35
7777281	CJ5	QC Standard	Soluble (CaCl2) pH	2015/01/14		97	%	97 - 103
		Spiked Blank	Soluble (CaCl2) pH	2015/01/14		99	%	97 - 103
		RPD	Soluble (CaCl2) pH	2015/01/14	0.6		%	N/A
7777314	CJ5	QC Standard	Soluble (CaCl2) pH	2015/01/14		99	%	97 - 103
		Spiked Blank	Soluble (CaCl2) pH	2015/01/14		100	%	97 - 103
		RPD	Soluble (CaCl2) pH	2015/01/14	0.3		%	N/A

N/A = Not Applicable
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Validation Signature Page

Maxxam Job #: B4A9530

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Dina Tleugabulova, Ph.D., Scientific Specialist, Inorganics Department

Karla Offord, B.Sc., Supervisor, Extractable Hydrocarbons

Sandy Yuan, M.Sc., Scientific Specialist

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam

Calgary: 4000 19st St. NE, T2E 6P8. Ph: (403) 291-3077, Fax: (403) 735-2240, Toll free: (800) 386-7247
Edmonton: 9331 - 48 Street, T6B 2R4. Ph: (780) 577-7100, Fax: (780) 450-4187, Toll free: (877) 465-8889
www.maxxamanalytics.com

12/063(1) MRC

Chain of Custody

A133617

Page: ____ of ____

Company:	Invoice To: C/O Report Address ☐	Report To: Same as Invoice ☐	Report Distribution (E-Mail):
Contact:	Stephen Legarec		
Address:	Prov: PC:	Prov: PC:	
Contact #s:	Ph: Cell:	Ph: Cell:	

REGULATORY GUIDELINES:
- ☐ AT1
- ☐ CCME
- ☐ Regulated Drinking Water
- ☐ Other:

All samples are held for 60 calendar days after sample receipt, unless specified otherwise.

PO #:
Project # / Name:
Site Location:
Quote #:
Sampled By:

SERVICE REQUESTED: ☐ RUSH (Contact lab to reserve) Date Required: ☐ REGULAR (5 to 7 Days)

See reverse for package specifics

	Sample ID	Depth (unit)	Matrix GW / SW Soil	Date/Time Sampled YY/MM/DD 24:00	SOIL: BTEX F1-F4	Sieve (75 micron)	Regulated Metals (CCME / AT1)	Salinity 4	Assessment ICP Metals	Basic Class II Landfill	Nutrients (Nuts-2)	Assessment Metals	WATER: ☐VOCs ☐BTEX F1	☐BTEX F1-F2	☐BTEX F1-F4	☐ Routine Water ☐ Turb ☐ F	☐ TOC	☐ DOC	Regulated Metals (CCME / AT1) Total	Dissolved	Mercury	☐ Total ☐ Dissolved	Other Analysis	HOLD - Do not Analyze	# of Containers Submitted
1	Comfrey Fall		Soil								✓	✓													
2	Rock Dust A		Soil								✓	✓													
3	Rock Dust B		Soil								✓	✓													
4	Leaves		Soil								✓	✓													
5	Initial Sample compost		Soil								✓	✓													
6	Biochar uncharged		Soil								✓	✓													
7	Used coffee Grounds		Soil								✓	✓													
8																									
9																									
10																									
11																									
12																									

Please indicate Filtered, Preserved or Both (F, P, F/P) → F/P

Relinquished By (Signature/Print):	Date (YY/MM/DD): 14/12/02	Time (24:00):
Relinquished By (Signature/Print):	Date (YY/MM/DD):	Time (24:00):
Special Instructions: Attn Jeremy	# of Jars Used & Not Submitted	

LAB USE ONLY

Received By:	Date:	Time:	Maxxam Job #: B4A9530 NFA
José Rivera	2014/12/02	15:13	
Lab Comments:	Custody Seal: Absent	Temperature: 12,17,17	Ice: Absent

AB FCD-00331 Rev3 2010/05

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