

Bottom Ash Data

2019 Week 23

The following analytical report was sent to the Ministry of Environment and Climate Change Strategy on June 18, 2019. The data represents bottom ash composite results for week 23 of 2019 (June 2, 2019 to June 8, 2019).

The bottom ash meets the requirements of Metro Vancouver's Bottom Ash Management Plan and is suitable for beneficial use during Coquitlam Landfill closure works.



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Date Received: 11-JUN-19
Report Date: 18-JUN-19 10:27 (MT)
Version: FINAL

Client Phone: 604-521-1025

Certificate of Analysis

Lab Work Order #: L2289242
Project P.O. #: VANCO-0000048466
Job Reference:
C of C Numbers:
Legal Site Desc:

Brent Mack, B.Sc.
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID	L2289242-1 soil 03-JUN-19 09:00 BA1923-A-1	L2289242-2 soil 03-JUN-19 09:00 BA1923-A-2	L2289242-3 soil 03-JUN-19 09:00 BA1923-A-3	L2289242-4 soil 03-JUN-19 09:00 BA1923-A-4	L2289242-5 soil 03-JUN-19 09:00 BA1923-A-5
Grouping	Analyte				
SOIL					
Physical Tests	Moisture (%)	16.7	17.2	16.0	16.6
	pH (1:2 soil:water) (pH)	10.51	10.61	10.70	10.81
Metals	Aluminum (Al) (mg/kg)	38500	34900	34100	31700
	Antimony (Sb) (mg/kg)	165	139	154	115
	Arsenic (As) (mg/kg)	49.6	39.1	47.0	37.4
	Barium (Ba) (mg/kg)	519	495	554	576
	Beryllium (Be) (mg/kg)	0.49	0.41	0.41	0.40
	Bismuth (Bi) (mg/kg)	7.62	9.18	8.83	6.15
	Boron (B) (mg/kg)	171	193	220	182
	Cadmium (Cd) (mg/kg)	13.7	13.1	20.1	10.5
	Calcium (Ca) (mg/kg)	138000	125000	139000	113000
	Chromium (Cr) (mg/kg)	187	152	179	188
	Cobalt (Co) (mg/kg)	59.3	1210	25.7	25.4
	Copper (Cu) (mg/kg)	2730	1720	4460	1620
	Iron (Fe) (mg/kg)	67300	50100	58600	79100
	Lead (Pb) (mg/kg)	376	371	1040	412
	Lithium (Li) (mg/kg)	21.0	108	28.1	16.8
	Magnesium (Mg) (mg/kg)	12100	11600	11500	10000
	Manganese (Mn) (mg/kg)	954	991	1440	835
	Mercury (Hg) (mg/kg)	<0.050	<0.050	<0.050	<0.050
	Molybdenum (Mo) (mg/kg)	45.5	47.6	37.8	25.7
	Nickel (Ni) (mg/kg)	184	131	180	132
	Phosphorus (P) (mg/kg)	13200	12100	12400	10800
	Potassium (K) (mg/kg)	6390	5470	5910	4800
	Selenium (Se) (mg/kg)	0.44	0.38	0.63	0.32
	Silver (Ag) (mg/kg)	3.79	3.77	4.44	5.30
	Sodium (Na) (mg/kg)	16300	14000	15900	13400
	Strontium (Sr) (mg/kg)	325	294	294	254
	Sulfur (S) (mg/kg)	15500	15300	14600	12900
	Thallium (Tl) (mg/kg)	0.084	0.073	0.086	0.076
	Tin (Sn) (mg/kg)	136	97.7	111	154
	Titanium (Ti) (mg/kg)	411	782	633	799
	Tungsten (W) (mg/kg)	8.69	6.95	6.34	8.54
	Uranium (U) (mg/kg)	7.48	6.56	7.01	7.18
	Vanadium (V) (mg/kg)	74.3	66.3	68.6	65.0
	Zinc (Zn) (mg/kg)	4680	4210	4840	5210
	Zirconium (Zr) (mg/kg)	2.0	1.5	1.1	1.3

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID	L2289242-6 soil 03-JUN-19 09:00 BA1923-A-6	L2289242-7 soil 03-JUN-19 09:00 BA1923-A-7	L2289242-8 soil 03-JUN-19 09:00 BA1923-A-8	L2289242-9 soil 03-JUN-19 09:00 BA1923-A-9	L2289242-10 soil 03-JUN-19 09:00 BA1923-A-10	
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	16.3	16.5	16.3	16.3	16.4
	pH (1:2 soil:water) (pH)	10.82	10.75	10.72	10.85	10.64
Metals	Aluminum (Al) (mg/kg)	37400	31500	36100	37100	36000
	Antimony (Sb) (mg/kg)	145	134	137	133	129
	Arsenic (As) (mg/kg)	36.2	36.2	37.0	37.1	35.1
	Barium (Ba) (mg/kg)	625	475	534	519	533
	Beryllium (Be) (mg/kg)	0.39	0.43	0.44	0.40	0.44
	Bismuth (Bi) (mg/kg)	6.25	8.40	6.05	7.33	7.94
	Boron (B) (mg/kg)	178	165	210	159	193
	Cadmium (Cd) (mg/kg)	12.6	12.4	11.3	13.7	11.8
	Calcium (Ca) (mg/kg)	115000	119000	123000	123000	123000
	Chromium (Cr) (mg/kg)	147	167	164	189	169
	Cobalt (Co) (mg/kg)	17.9	45.9	31.7	46.2	355
	Copper (Cu) (mg/kg)	1870	1450	4180	1990	2600
	Iron (Fe) (mg/kg)	67100	48600	56500	56600	49500
	Lead (Pb) (mg/kg)	291	335	1060	2890	352
	Lithium (Li) (mg/kg)	15.4	17.3	19.1	18.0	21.1
	Magnesium (Mg) (mg/kg)	10700	9810	11500	11200	10900
	Manganese (Mn) (mg/kg)	808	789	801	754	713
	Mercury (Hg) (mg/kg)	<0.050	<0.050	0.062	<0.050	<0.050
	Molybdenum (Mo) (mg/kg)	27.1	35.9	30.9	42.6	31.7
	Nickel (Ni) (mg/kg)	141	130	179	117	132
	Phosphorus (P) (mg/kg)	10500	12700	11100	12900	11400
	Potassium (K) (mg/kg)	4770	5540	5300	5160	5730
	Selenium (Se) (mg/kg)	0.42	0.42	0.41	0.44	0.38
	Silver (Ag) (mg/kg)	3.89	3.49	4.83	3.46	4.54
	Sodium (Na) (mg/kg)	12800	14500	13900	13300	14000
	Strontium (Sr) (mg/kg)	332	274	298	335	326
	Sulfur (S) (mg/kg)	13100	14300	14300	16200	12800
	Thallium (Tl) (mg/kg)	0.080	0.081	0.073	0.078	0.075
	Tin (Sn) (mg/kg)	103	130	98.0	113	111
	Titanium (Ti) (mg/kg)	851	408	562	660	710
	Tungsten (W) (mg/kg)	6.30	6.65	4.47	6.25	8.42
	Uranium (U) (mg/kg)	6.13	6.25	6.21	6.85	6.41
	Vanadium (V) (mg/kg)	65.7	58.6	67.2	68.2	66.9
	Zinc (Zn) (mg/kg)	4670	5010	4610	3990	4750
	Zirconium (Zr) (mg/kg)	1.4	1.3	1.4	1.5	1.5

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2289242-11	L2289242-12		
		Description	soil	soil		
		Sampled Date	03-JUN-19	03-JUN-19		
		Sampled Time	09:00	09:00		
		Client ID	BA1923-A-11	BA1923-A-12		
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)		17.2	16.3		
	pH (1:2 soil:water) (pH)		10.74	10.55		
Metals	Aluminum (Al) (mg/kg)		34700	32200		
	Antimony (Sb) (mg/kg)		155	143		
	Arsenic (As) (mg/kg)		39.9	36.6		
	Barium (Ba) (mg/kg)		568	539		
	Beryllium (Be) (mg/kg)		0.46	0.51		
	Bismuth (Bi) (mg/kg)		7.13	19.1		
	Boron (B) (mg/kg)		184	156		
	Cadmium (Cd) (mg/kg)		15.7	11.8		
	Calcium (Ca) (mg/kg)		129000	126000		
	Chromium (Cr) (mg/kg)		272	140		
	Cobalt (Co) (mg/kg)		28.0	36.3		
	Copper (Cu) (mg/kg)		4840	17800		
	Iron (Fe) (mg/kg)		58400	54000		
	Lead (Pb) (mg/kg)		444	765		
	Lithium (Li) (mg/kg)		19.7	16.9		
	Magnesium (Mg) (mg/kg)		12200	9990		
	Manganese (Mn) (mg/kg)		818	745		
	Mercury (Hg) (mg/kg)		<0.050	<0.050		
	Molybdenum (Mo) (mg/kg)		50.7	62.1		
	Nickel (Ni) (mg/kg)		138	164		
	Phosphorus (P) (mg/kg)		12500	11400		
	Potassium (K) (mg/kg)		6070	5370		
	Selenium (Se) (mg/kg)		0.46	0.37		
	Silver (Ag) (mg/kg)		3.85	5.55		
	Sodium (Na) (mg/kg)		14800	14900		
	Strontium (Sr) (mg/kg)		297	303		
	Sulfur (S) (mg/kg)		14900	12500		
	Thallium (Tl) (mg/kg)		0.089	0.077		
	Tin (Sn) (mg/kg)		149	172		
	Titanium (Ti) (mg/kg)		757	519		
	Tungsten (W) (mg/kg)		28.9	8.52		
	Uranium (U) (mg/kg)		7.06	5.87		
Vanadium (V) (mg/kg)		74.0	72.1			
Zinc (Zn) (mg/kg)		5380	8500			
Zirconium (Zr) (mg/kg)		1.3	1.1			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2289242-1	L2289242-2	L2289242-3	L2289242-4	L2289242-5
		Description	soil	soil	soil	soil	soil
		Sampled Date	03-JUN-19	03-JUN-19	03-JUN-19	03-JUN-19	03-JUN-19
		Sampled Time	09:00	09:00	09:00	09:00	09:00
		Client ID	BA1923-A-1	BA1923-A-2	BA1923-A-3	BA1923-A-4	BA1923-A-5
Grouping	Analyte						
SOIL							
TCLP Metals	1st Preliminary pH (pH)		11.33	11.40	11.35	11.35	11.35
	2nd Preliminary pH (pH)		9.18	9.50	9.09	9.86	9.01
	Final pH (pH)		6.00	5.97	6.08	5.95	6.01
	Extraction Solution Initial pH (pH)		2.85	2.85	2.85	2.85	2.85
	Antimony (Sb)-Leachable (mg/L)		<1.0	<1.0	<1.0	<1.0	<1.0
	Arsenic (As)-Leachable (mg/L)		<1.0	<1.0	<1.0	<1.0	<1.0
	Barium (Ba)-Leachable (mg/L)		<2.5	<2.5	<2.5	<2.5	<2.5
	Beryllium (Be)-Leachable (mg/L)		<0.025	<0.025	<0.025	<0.025	<0.025
	Boron (B)-Leachable (mg/L)		2.38	2.43	2.71	2.41	2.29
	Cadmium (Cd)-Leachable (mg/L)		0.274	0.189	0.288	0.211	0.227
	Calcium (Ca)-Leachable (mg/L)		2190	2070	2130	2080	2070
	Chromium (Cr)-Leachable (mg/L)		<0.25	<0.25	<0.25	<0.25	<0.25
	Cobalt (Co)-Leachable (mg/L)		0.534	0.807	1.04	0.696	0.439
	Copper (Cu)-Leachable (mg/L)		1.12	1.25	0.739	1.01	1.15
	Iron (Fe)-Leachable (mg/L)		<5.0	<5.0	<5.0	<5.0	<5.0
	Lead (Pb)-Leachable (mg/L)		<0.25	<0.25	<0.25	<0.25	<0.25
	Magnesium (Mg)-Leachable (mg/L)		117	118	116	110	115
	Mercury (Hg)-Leachable (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Leachable (mg/L)		0.49	0.49	0.54	0.46	0.43
	Selenium (Se)-Leachable (mg/L)		<1.0	<1.0	<1.0	<1.0	<1.0
	Silver (Ag)-Leachable (mg/L)		<0.050	<0.050	<0.050	<0.050	<0.050
	Thallium (Tl)-Leachable (mg/L)		<1.0	<1.0	<1.0	<1.0	<1.0
	Vanadium (V)-Leachable (mg/L)		<0.15	<0.15	<0.15	<0.15	<0.15
	Zinc (Zn)-Leachable (mg/L)		37.9	41.9	36.7	43.0	44.3

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2289242-6	L2289242-7	L2289242-8	L2289242-9	L2289242-10
		Description	soil	soil	soil	soil	soil
		Sampled Date	03-JUN-19	03-JUN-19	03-JUN-19	03-JUN-19	03-JUN-19
		Sampled Time	09:00	09:00	09:00	09:00	09:00
		Client ID	BA1923-A-6	BA1923-A-7	BA1923-A-8	BA1923-A-9	BA1923-A-10
Grouping	Analyte						
SOIL							
TCLP Metals	1st Preliminary pH (pH)		11.42	11.31	11.29	11.41	11.37
	2nd Preliminary pH (pH)		9.15	9.07	9.83	9.23	9.19
	Final pH (pH)		6.08	5.98	5.96	6.05	5.94
	Extraction Solution Initial pH (pH)		2.85	2.85	2.85	2.85	2.85
	Antimony (Sb)-Leachable (mg/L)		<1.0	<1.0	<1.0	<1.0	<1.0
	Arsenic (As)-Leachable (mg/L)		<1.0	<1.0	<1.0	<1.0	<1.0
	Barium (Ba)-Leachable (mg/L)		<2.5	<2.5	<2.5	<2.5	<2.5
	Beryllium (Be)-Leachable (mg/L)		<0.025	<0.025	<0.025	<0.025	<0.025
	Boron (B)-Leachable (mg/L)		2.51	2.41	2.48	2.62	2.34
	Cadmium (Cd)-Leachable (mg/L)		0.296	0.192	0.189	0.215	0.368
	Calcium (Ca)-Leachable (mg/L)		2120	2030	2050	2190	2070
	Chromium (Cr)-Leachable (mg/L)		<0.25	<0.25	<0.25	<0.25	<0.25
	Cobalt (Co)-Leachable (mg/L)		1.66	0.609	0.422	0.690	0.545
	Copper (Cu)-Leachable (mg/L)		0.802	0.741	0.887	0.899	0.823
	Iron (Fe)-Leachable (mg/L)		<5.0	<5.0	<5.0	<5.0	<5.0
	Lead (Pb)-Leachable (mg/L)		<0.25	<0.25	<0.25	<0.25	<0.25
	Magnesium (Mg)-Leachable (mg/L)		116	115	114	120	116
	Mercury (Hg)-Leachable (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Leachable (mg/L)		0.46	0.46	0.47	0.48	0.51
	Selenium (Se)-Leachable (mg/L)		<1.0	<1.0	<1.0	<1.0	<1.0
	Silver (Ag)-Leachable (mg/L)		<0.050	<0.050	<0.050	<0.050	<0.050
	Thallium (Tl)-Leachable (mg/L)		<1.0	<1.0	<1.0	<1.0	<1.0
	Vanadium (V)-Leachable (mg/L)		<0.15	<0.15	<0.15	<0.15	<0.15
	Zinc (Zn)-Leachable (mg/L)		32.4	45.0	60.0	36.6	52.0

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L2289242-11 soil 03-JUN-19 09:00 BA1923-A-11	L2289242-12 soil 03-JUN-19 09:00 BA1923-A-12		
Grouping	Analyte				
SOIL					
TCLP Metals	1st Preliminary pH (pH)	11.40	11.37		
	2nd Preliminary pH (pH)	9.27	9.21		
	Final pH (pH)	6.05	5.85		
	Extraction Solution Initial pH (pH)	2.85	2.85		
	Antimony (Sb)-Leachable (mg/L)	<1.0	<1.0		
	Arsenic (As)-Leachable (mg/L)	<1.0	<1.0		
	Barium (Ba)-Leachable (mg/L)	<2.5	<2.5		
	Beryllium (Be)-Leachable (mg/L)	<0.025	<0.025		
	Boron (B)-Leachable (mg/L)	2.65	2.35		
	Cadmium (Cd)-Leachable (mg/L)	0.185	0.209		
	Calcium (Ca)-Leachable (mg/L)	2220	2070		
	Chromium (Cr)-Leachable (mg/L)	<0.25	<0.25		
	Cobalt (Co)-Leachable (mg/L)	0.415	0.419		
	Copper (Cu)-Leachable (mg/L)	0.978	0.933		
	Iron (Fe)-Leachable (mg/L)	<5.0	<5.0		
	Lead (Pb)-Leachable (mg/L)	<0.25	<0.25		
	Magnesium (Mg)-Leachable (mg/L)	121	115		
	Mercury (Hg)-Leachable (mg/L)	<0.0010	<0.0010		
	Nickel (Ni)-Leachable (mg/L)	0.58	0.60		
	Selenium (Se)-Leachable (mg/L)	<1.0	<1.0		
	Silver (Ag)-Leachable (mg/L)	<0.050	<0.050		
	Thallium (Tl)-Leachable (mg/L)	<1.0	<1.0		
	Vanadium (V)-Leachable (mg/L)	<0.15	<0.15		
	Zinc (Zn)-Leachable (mg/L)	39.5	64.4		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Bismuth (Bi)	DUP-H	L2289242-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Cobalt (Co)	DUP-H	L2289242-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Lead (Pb)	DUP-H	L2289242-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Cadmium (Cd)-Leachable	MS-B	L2289242-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Leachable	MS-B	L2289242-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Cobalt (Co)-Leachable	MS-B	L2289242-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Zinc (Zn)-Leachable	MS-B	L2289242-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-200.2-CVAF-VA	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (mod)
Soil samples are digested with hot nitric and hydrochloric acids, followed by CVAAS analysis. This method is fully compliant with the BC SALM strong acid leachable metals digestion method.			
HG-TCLP-CVAFS-VA	Soil	Mercury by CVAAS (TCLP)	EPA 1311/245.7
This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 245.7).			
MET-200.2-CCMS-VA	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020A (mod)
Soil/sediment is dried, disaggregated, and sieved (2 mm). Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.			
Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H ₂ S) may be excluded if lost during sampling, storage, or digestion.			
MET-TCLP-CCMS-VA	Soil	Metals by ICPMS (TCLP)	EPA 1311/6020A
This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modified from EPA Method 6020A).			
MOISTURE-VA	Soil	Moisture content	CCME PHC in Soil - Tier 1 (mod)
This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of two hours.			
PH-1:2-VA	Soil	pH in Soil (1:2 Soil:Water Extraction)	BC WLAP METHOD: PH, ELECTROMETRIC, SOIL
This analysis is carried out in accordance with procedures described in the pH, Electrometric in Soil and Sediment method - Section B Physical/Inorganic and Misc. Constituents, BC Environmental Laboratory Manual 2007. The procedure involves mixing the dried (at <60°C) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water. The pH of the solution is then measured using a standard pH probe.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

Reference Information

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.


Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Report To		Report Format / Distribution				Service Requested (Rush for routine analysis subject to availability)									
Company: Covanta Energy		<input type="checkbox"/> Standard <input type="checkbox"/> Other <input checked="" type="checkbox"/> PDF <input type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax				<input checked="" type="radio"/> Regular (Standard Turnaround Times - Business Days) <input type="radio"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT <input type="radio"/> Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT <input type="radio"/> Same Day or Weekend Emergency - Contact ALS to Confirm TAT									
Contact: Steve Mckinney / Dan Skrypnyk		Address: 5150 Riverbend Drive Burnaby BC		Email 1: smckinney@covanta.com											
Phone: 604-521-1025		Fax: <input type="checkbox"/> Yes <input type="checkbox"/> No		Email 2: rjohnson4@covanta.com											
				Email 3: dskrypnyk@covanta.com											
				brent.kirkpatrick@metrovancover.org											
				Sarah.Wellman@metrovancover.org											

Invoice To Same as Report ?		Client / Project Information				Please indicate below Filtered, Preserved or both (F, P, F/P)										
Hardcopy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No		Job #:														
Company:		PO / AFE: PO# 46693 Weekly Bottom Ash - Suite														
Contact:		LSD: (includes 2:1 pH)														
Address:		Quote #:														
Phone:		ALS Contact:														
Fax:		Sampler:														
Lab Work Order # (lab use only)																
Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	MET-TCLP-VA (all metals, Hg)	MOISTURE	Chrome 6	MET-CSR-FULL-VA (all metals)								Number of Containers
BA1923-A-1		03-Jun-19	9:00	Soil	X	X		X								1
BA1923-A-2		03-Jun-19	9:00	Soil	X	X		X								1
BA1923-A-3		03-Jun-19	9:00	Soil	X	X		X								1
BA1923-A-4		03-Jun-19	9:00	Soil	X	X		X								1
BA1923-A-5		03-Jun-19	9:00	Soil	X	X		X								1
BA1923-A-6	 L2289242-COFC	03-Jun-19	9:00	Soil	X	X		X								1
BA1923-A-7		03-Jun-19	9:00	Soil	X	X		X								1
BA1923-A-8		03-Jun-19	9:00	Soil	X	X		X								1
BA1923-A-9		03-Jun-19	9:00	Soil	X	X		X								1
BA1923-A-10		03-Jun-19	9:00	Soil	X	X		X								1
BA1923-A-11		03-Jun-19	9:00	Soil	X	X		X								1
BA1923-A-12		03-Jun-19	9:00	Soil	X	X		X								1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.
 By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.
 Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by: <i>KCL</i>	Date: <i>11/6/19</i>	Time: <i>7:45</i>	Received by: <i>22</i>	Date: <i>June 11</i>	Time: <i>12:15P</i>	Temperature: <i>23 °C</i>	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
<i>2019</i>										