

Bottom Ash Data

2019 Week 45

The following analytical report was sent to the Ministry of Environment and Climate Change Strategy on November 22, 2019. The data represents bottom ash composite results for week 45 of 2019 (November 3, 2019 to November 9, 2019).

The bottom ash meets the requirements of Metro Vancouver's Bottom Ash Management Plan and is suitable for disposal.



Covanta Burnaby R.E., ULC
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Date Received: 13-NOV-19
Report Date: 21-NOV-19 11:04 (MT)
Version: FINAL

Client Phone: 604-521-1025

Certificate of Analysis

Lab Work Order #: L2381533
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		L2381533-1 Soil 06-NOV-19 09:00 BA1945-A-1	L2381533-2 Soil 06-NOV-19 09:00 BA1945-A-2	L2381533-3 Soil 06-NOV-19 09:00 BA1945-A-3	L2381533-4 Soil 06-NOV-19 09:00 BA1945-A-4	L2381533-5 Soil 06-NOV-19 09:00 BA1945-A-5
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	20.1	20.1	20.5	19.9	18.3
	pH (1:2 soil:water) (pH)	10.32	10.31	10.37	10.47	10.44
Metals	Aluminum (Al) (mg/kg)	48400	40400	32600	35000	42500
	Antimony (Sb) (mg/kg)	155	127	127	109	134
	Arsenic (As) (mg/kg)	30.9	40.2	32.6	28.1	29.8
	Barium (Ba) (mg/kg)	608	612	642	626	609
	Beryllium (Be) (mg/kg)	0.39	1.74	0.38	0.41	0.44
	Bismuth (Bi) (mg/kg)	9.33	7.34	8.34	8.27	8.11
	Boron (B) (mg/kg)	333	430	354	263	291
	Cadmium (Cd) (mg/kg)	10.7	11.0	10.3	9.72	13.1
	Calcium (Ca) (mg/kg)	128000	132000	136000	123000	147000
	Chromium (Cr) (mg/kg)	247	665	326	170	185
	Cobalt (Co) (mg/kg)	21.4	194	55.2	25.2	50.0
	Copper (Cu) (mg/kg)	3950	4410	2650	24900	5970
	Iron (Fe) (mg/kg)	75900	78200	89100	74100	74500
	Lead (Pb) (mg/kg)	1540	537	771	543	553
	Lithium (Li) (mg/kg)	18.4	18.8	18.2	16.6	25.8
	Magnesium (Mg) (mg/kg)	11400	10900	12100	11500	12800
	Manganese (Mn) (mg/kg)	1170	993	1020	975	1250
	Mercury (Hg) (mg/kg)	<0.050	<0.050	<0.050	0.065	<0.050
	Molybdenum (Mo) (mg/kg)	101	73.2	127	46.2	75.6
	Nickel (Ni) (mg/kg)	170	856	568	305	192
	Phosphorus (P) (mg/kg)	11500	12900	11000	10200	13200
	Potassium (K) (mg/kg)	5270	5560	5170	4800	5770
	Selenium (Se) (mg/kg)	0.31	0.37	0.37	0.40	0.42
	Silver (Ag) (mg/kg)	8.11	5.12	9.96	5.93	11.0
	Sodium (Na) (mg/kg)	14800	16600	15100	13700	15400
	Strontium (Sr) (mg/kg)	275	272	326	282	324
	Sulfur (S) (mg/kg)	12300	13000	12800	11400	14100
	Thallium (Tl) (mg/kg)	0.060	0.050	0.059	0.078	0.060
	Tin (Sn) (mg/kg)	104	130	123	262	141
	Titanium (Ti) (mg/kg)	816	676	635	503	391
	Tungsten (W) (mg/kg)	22.7	22.3	58.1	13.6	17.5
	Uranium (U) (mg/kg)	5.16	5.05	5.59	4.86	5.81
	Vanadium (V) (mg/kg)	56.2	54.1	58.5	47.9	59.8
	Zinc (Zn) (mg/kg)	4350	3950	3830	11200	6800
	Zirconium (Zr) (mg/kg)	2.3	1.7	1.3	1.3	1.7

* 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	L2381533-6 Soil 06-NOV-19 09:00 BA1945-A-6	L2381533-7 Soil 06-NOV-19 09:00 BA1945-A-7	L2381533-8 Soil 06-NOV-19 09:00 BA1945-A-8	L2381533-9 Soil 06-NOV-19 09:00 BA1945-A-9	L2381533-10 Soil 06-NOV-19 09:00 BA1945-A-10	
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	19.5	20.4	19.6	19.2	19.3
	pH (1:2 soil:water) (pH)	10.55	10.43	10.48	10.60	10.52
Metals	Aluminum (Al) (mg/kg)	34300	37300	51500	30800	37100
	Antimony (Sb) (mg/kg)	111	115	159	167	120
	Arsenic (As) (mg/kg)	27.9	24.5	28.9	33.6	43.9
	Barium (Ba) (mg/kg)	582	544	596	557	607
	Beryllium (Be) (mg/kg)	0.40	0.42	0.46	0.39	0.36
	Bismuth (Bi) (mg/kg)	8.05	7.59	8.55	13.2	10.8
	Boron (B) (mg/kg)	276	346	526	298	325
	Cadmium (Cd) (mg/kg)	13.0	14.7	10.5	9.72	19.4
	Calcium (Ca) (mg/kg)	134000	136000	137000	123000	126000
	Chromium (Cr) (mg/kg)	160	161	176	186	182
	Cobalt (Co) (mg/kg)	30.2	29.9	25.3	65.2	274
	Copper (Cu) (mg/kg)	3320	5030	6020	17000	7870
	Iron (Fe) (mg/kg)	66800	60900	67200	87000	93900
	Lead (Pb) (mg/kg)	1340	874	599	2690	2490
	Lithium (Li) (mg/kg)	18.2	17.6	121	17.9	20.5
	Magnesium (Mg) (mg/kg)	12800	14000	12600	10600	10900
	Manganese (Mn) (mg/kg)	1330	801	956	897	1150
	Mercury (Hg) (mg/kg)	<0.050	<0.050	0.065	<0.050	<0.050
	Molybdenum (Mo) (mg/kg)	46.5	42.6	51.2	78.2	57.3
	Nickel (Ni) (mg/kg)	432	147	165	1030	299
	Phosphorus (P) (mg/kg)	11300	11100	12300	10000	10800
	Potassium (K) (mg/kg)	5140	5480	6150	4700	5290
	Selenium (Se) (mg/kg)	0.30	0.31	0.47	0.40	0.33
	Silver (Ag) (mg/kg)	5.69	14.5	23.3	6.36	4.93
	Sodium (Na) (mg/kg)	14200	15100	15500	13600	14100
	Strontium (Sr) (mg/kg)	281	370	310	257	263
	Sulfur (S) (mg/kg)	12800	12500	13500	11800	12500
	Thallium (Tl) (mg/kg)	0.056	0.052	0.060	0.058	0.074
	Tin (Sn) (mg/kg)	129	310	142	128	202
	Titanium (Ti) (mg/kg)	312	356	613	541	823
	Tungsten (W) (mg/kg)	16.6	24.0	18.6	19.0	13.4
	Uranium (U) (mg/kg)	5.46	4.96	5.60	4.84	5.16
	Vanadium (V) (mg/kg)	56.5	52.4	57.6	48.5	61.5
	Zinc (Zn) (mg/kg)	5010	3710	4790	5380	6660
	Zirconium (Zr) (mg/kg)	1.7	1.6	2.6	1.2	1.3

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2381533-11	L2381533-12		
		Description	Soil	Soil		
		Sampled Date	06-NOV-19	06-NOV-19		
		Sampled Time	09:00	09:00		
		Client ID	BA1945-A-11	BA1945-A-12		
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	18.7	18.2			
	pH (1:2 soil:water) (pH)	10.52	10.48			
Metals	Aluminum (Al) (mg/kg)	30900	29800			
	Antimony (Sb) (mg/kg)	164	118			
	Arsenic (As) (mg/kg)	34.0	30.7			
	Barium (Ba) (mg/kg)	584	537			
	Beryllium (Be) (mg/kg)	0.35	0.41			
	Bismuth (Bi) (mg/kg)	9.05	8.67			
	Boron (B) (mg/kg)	378	364			
	Cadmium (Cd) (mg/kg)	13.0	11.3			
	Calcium (Ca) (mg/kg)	124000	136000			
	Chromium (Cr) (mg/kg)	198	173			
	Cobalt (Co) (mg/kg)	35.3	72.2			
	Copper (Cu) (mg/kg)	7240	3550			
	Iron (Fe) (mg/kg)	80900	73200			
	Lead (Pb) (mg/kg)	1570	578			
	Lithium (Li) (mg/kg)	16.2	19.4			
	Magnesium (Mg) (mg/kg)	10200	11800			
	Manganese (Mn) (mg/kg)	1490	1070			
	Mercury (Hg) (mg/kg)	<0.050	<0.050			
	Molybdenum (Mo) (mg/kg)	54.0	59.4			
	Nickel (Ni) (mg/kg)	138	248			
	Phosphorus (P) (mg/kg)	11500	11700			
	Potassium (K) (mg/kg)	4610	5700			
	Selenium (Se) (mg/kg)	0.28	0.39			
	Silver (Ag) (mg/kg)	7.86	7.35			
	Sodium (Na) (mg/kg)	13600	15400			
	Strontium (Sr) (mg/kg)	259	298			
	Sulfur (S) (mg/kg)	10700	13500			
	Thallium (Tl) (mg/kg)	0.054	0.058			
	Tin (Sn) (mg/kg)	294	123			
	Titanium (Ti) (mg/kg)	384	314			
	Tungsten (W) (mg/kg)	16.9	15.9			
	Uranium (U) (mg/kg)	4.78	5.52			
Vanadium (V) (mg/kg)	61.0	55.4				
Zinc (Zn) (mg/kg)	3990	4160				
Zirconium (Zr) (mg/kg)	1.5	1.5				

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2381533-1	L2381533-2	L2381533-3	L2381533-4	L2381533-5
		Description	Soil	Soil	Soil	Soil	Soil
		Sampled Date	06-NOV-19	06-NOV-19	06-NOV-19	06-NOV-19	06-NOV-19
		Sampled Time	09:00	09:00	09:00	09:00	09:00
		Client ID	BA1945-A-1	BA1945-A-2	BA1945-A-3	BA1945-A-4	BA1945-A-5
Grouping	Analyte						
SOIL							
TCLP Metals	1st Preliminary pH (pH)		11.33	11.30	11.38	11.34	11.33
	2nd Preliminary pH (pH)		8.44	8.47	8.38	8.40	8.41
	Final pH (pH)		6.18	6.09	6.03	6.21	5.97
	Extraction Solution Initial pH (pH)		2.91	2.91	2.91	2.91	2.91
	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)		4.38	4.02	4.02	3.82	3.53
	Cadmium (Cd)-Leachable (mg/L)		0.201	0.200	0.185	0.142	0.151
	Calcium (Ca)-Leachable (mg/L)		1960	1890	2010	1900	1880
	Chromium (Cr)-Leachable (mg/L)		<0.25	<0.25	<0.25	<0.25	<0.25
	Cobalt (Co)-Leachable (mg/L)		1.06	0.367	0.407	0.750	0.697
	Copper (Cu)-Leachable (mg/L)		0.653	0.683	0.524	0.575	0.924
	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)		122	121	132	123	120
	Mercury (Hg)-Leachable (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Leachable (mg/L)		0.60	0.67	0.71	0.59	0.53
	Selenium (Se)-Leachable (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	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)		31.6	42.2	46.4	34.9	30.8

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2381533-6	L2381533-7	L2381533-8	L2381533-9	L2381533-10
		Description	Soil	Soil	Soil	Soil	Soil
		Sampled Date	06-NOV-19	06-NOV-19	06-NOV-19	06-NOV-19	06-NOV-19
		Sampled Time	09:00	09:00	09:00	09:00	09:00
		Client ID	BA1945-A-6	BA1945-A-7	BA1945-A-8	BA1945-A-9	BA1945-A-10
Grouping	Analyte						
SOIL							
TCLP Metals	1st Preliminary pH (pH)		11.31	11.37	11.36	11.37	11.39
	2nd Preliminary pH (pH)		8.11	8.21	8.54	9.01	8.31
	Final pH (pH)		6.08	6.07	6.13	6.08	6.25
	Extraction Solution Initial pH (pH)		2.91	2.91	2.91	2.91	2.91
	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)		3.67	3.60	3.53	3.88	3.79
	Cadmium (Cd)-Leachable (mg/L)		0.178	0.167	0.177	0.145	0.166
	Calcium (Ca)-Leachable (mg/L)		1860	1880	1870	1840	1860
	Chromium (Cr)-Leachable (mg/L)		<0.25	<0.25	<0.25	<0.25	<0.25
	Cobalt (Co)-Leachable (mg/L)		0.587	0.707	0.550	0.480	0.940
	Copper (Cu)-Leachable (mg/L)		0.882	0.854	0.544	0.419	0.976
	Iron (Fe)-Leachable (mg/L)		<5.0	<5.0	<5.0	<5.0	<5.0
	Lead (Pb)-Leachable (mg/L)		<0.25	2.78	<0.25	<0.25	<0.25
	Magnesium (Mg)-Leachable (mg/L)		123	124	121	122	126
	Mercury (Hg)-Leachable (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Leachable (mg/L)		0.50	0.61	0.57	0.66	0.63
	Selenium (Se)-Leachable (mg/L)		<0.10	<0.10	<0.10	<0.10	<0.10
	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)		35.4	46.5	40.7	46.2	32.7

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2381533-11	L2381533-12			
		Description	Soil	Soil			
		Sampled Date	06-NOV-19	06-NOV-19			
		Sampled Time	09:00	09:00			
		Client ID	BA1945-A-11	BA1945-A-12			
Grouping	Analyte						
SOIL							
TCLP Metals	1st Preliminary pH (pH)	11.39	11.37				
	2nd Preliminary pH (pH)	8.34	8.28				
	Final pH (pH)	6.27	6.17				
	Extraction Solution Initial pH (pH)	2.91	2.91				
	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)	4.15	3.77				
	Cadmium (Cd)-Leachable (mg/L)	0.155	0.189				
	Calcium (Ca)-Leachable (mg/L)	1980	1830				
	Chromium (Cr)-Leachable (mg/L)	<0.25	<0.25				
	Cobalt (Co)-Leachable (mg/L)	0.725	0.410				
	Copper (Cu)-Leachable (mg/L)	0.766	0.551				
	Iron (Fe)-Leachable (mg/L)	<5.0	<5.0				
	Lead (Pb)-Leachable (mg/L)	<0.25	<0.25				
	Magnesium (Mg)-Leachable (mg/L)	125	115				
	Mercury (Hg)-Leachable (mg/L)	<0.0010	<0.0010				
	Nickel (Ni)-Leachable (mg/L)	0.62	0.54				
	Selenium (Se)-Leachable (mg/L)	<0.10	<0.10				
	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)	33.0	37.0				

* 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	Cadmium (Cd)	DUP-H	L2381533-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Leachable	MS-B	L2381533-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Cobalt (Co)-Leachable	MS-B	L2381533-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Zinc (Zn)-Leachable	MS-B	L2381533-1, -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 "pH, Electrometric in Soil and Sediment - Prescriptive Method", Rev. 2005, Section B Physical, Inorganic and Misc. Constituents, BC Environmental Laboratory Manual. 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.



L2381533-COFC

Form of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # _____

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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="radio"/> Regular (Standard Turnaround Times - Business Days)	
Contact:	Steve Mckinney / Dan Skrypnyk	<input checked="" type="checkbox"/> PDF	<input type="checkbox"/> Excel	<input type="checkbox"/> Digital	<input type="checkbox"/> Fax
Address:	5150 Riverbend Drive	Email 1:	smckinney@covanta.com		
	Burnaby BC	Email 2:	rjohnson4@covanta.com		
Phone:	604-521-1025	Email 3:	dskrypnyk@covanta.com		
	<input type="checkbox"/> Yes <input type="checkbox"/> No		brent.kirkpatrick@metrovancoouver.org		
			Sarah.Wellman@metrovancoouver.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:					
Lab Work Order #		ALS Contact:		Sampler:	
(lab use only)					

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Analysis Request				Number of Containers
					MET-TCLP-VA (all metals, Hg)	MOISTURE	Chrome 6	MET-CSR+FULL-VA (all metals)	
BA1945-A-1		06-Nov-19	9:00	Soil	X	X		X	1
BA1945-A-2		06-Nov-19	9:00	Soil	X	X		X	1
BA1945-A-3		06-Nov-19	9:00	Soil	X	X		X	1
BA1945-A-4		06-Nov-19	9:00	Soil	X	X		X	1
BA1945-A-5		06-Nov-19	9:00	Soil	X	X		X	1
BA1945-A-6		06-Nov-19	9:00	Soil	X	X		X	1
BA1945-A-7		06-Nov-19	9:00	Soil	X	X		X	1
BA1945-A-8		06-Nov-19	9:00	Soil	X	X		X	1
BA1945-A-9		06-Nov-19	9:00	Soil	X	X		X	1
BA1945-A-10		06-Nov-19	9:00	Soil	X	X		X	1
BA1945-A-11		06-Nov-19	9:00	Soil	X	X		X	1
BA1945-A-12		06-Nov-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:	Date (dd-mmm-yy)	Time (hh:mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No? If Yes add SIF
<i>[Signature]</i>	2-Nov-19	07:00	JG	13 NOV 19	12:05 PM	17.17°C				