

Bottom Ash Data

2019 Week 31

The following analytical report was sent to the Ministry of Environment and Climate Change Strategy on August 14, 2019. The data represents bottom ash composite results for week 31 of 2019 (July 28, 2019 to August 3, 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.



Covanta Burnaby R.E., ULC
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Burnaby BC V3N 4V3

Date Received: 06-AUG-19
Report Date: 13-AUG-19 10:06 (MT)
Version: FINAL

Client Phone: 604-521-1025

Certificate of Analysis

Lab Work Order #: L2323048
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		L2323048-1 Soil 31-JUL-19 09:00 BA1931-A-1	L2323048-2 Soil 31-JUL-19 09:00 BA1931-A-2	L2323048-3 Soil 31-JUL-19 09:00 BA1931-A-3	L2323048-4 Soil 31-JUL-19 09:00 BA1931-A-4	L2323048-5 Soil 31-JUL-19 09:00 BA1931-A-5
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	15.3	13.9	14.2	15.4	15.7
	pH (1:2 soil:water) (pH)	10.92	10.79	10.83	10.89	10.94
Metals	Aluminum (Al) (mg/kg)	33200	29900	31200	34400	24500
	Antimony (Sb) (mg/kg)	129	108	114	132	111
	Arsenic (As) (mg/kg)	33.9	29.1	36.2	39.7	30.0
	Barium (Ba) (mg/kg)	567	618	580	523	528
	Beryllium (Be) (mg/kg)	0.36	0.36	0.37	0.58	0.36
	Bismuth (Bi) (mg/kg)	5.81	5.61	6.16	6.74	6.11
	Boron (B) (mg/kg)	223	196	177	181	161
	Cadmium (Cd) (mg/kg)	10.4	10.5	10.3	12.6	11.7
	Calcium (Ca) (mg/kg)	108000	110000	118000	112000	109000
	Chromium (Cr) (mg/kg)	133	169	161	133	118
	Cobalt (Co) (mg/kg)	32.3	76.6	37.0	48.3	23.2
	Copper (Cu) (mg/kg)	2080	1500	1470	2610	2100
	Iron (Fe) (mg/kg)	57900	75400	63100	58400	53700
	Lead (Pb) (mg/kg)	348	321	542	429	1120
	Lithium (Li) (mg/kg)	13.7	17.2	33.4	13.9	13.5
	Magnesium (Mg) (mg/kg)	8880	9380	10800	9560	7840
	Manganese (Mn) (mg/kg)	748	1820	725	767	737
	Mercury (Hg) (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Molybdenum (Mo) (mg/kg)	30.9	29.9	31.1	33.9	27.6
	Nickel (Ni) (mg/kg)	128	88.8	184	177	217
	Phosphorus (P) (mg/kg)	7990	8300	10000	9040	8030
	Potassium (K) (mg/kg)	5160	5160	5340	5420	5120
	Selenium (Se) (mg/kg)	0.38	0.26	0.35	0.38	0.31
	Silver (Ag) (mg/kg)	3.21	2.79	8.27	11.2	3.33
	Sodium (Na) (mg/kg)	14900	15600	14600	13800	13100
	Strontium (Sr) (mg/kg)	232	241	272	252	314
	Sulfur (S) (mg/kg)	12000	10900	11600	13800	11300
Thallium (Tl) (mg/kg)	0.111	0.056	0.057	0.059	0.052	
Tin (Sn) (mg/kg)	113	111	112	113	99.3	
Titanium (Ti) (mg/kg)	901	772	821	1210	980	
Tungsten (W) (mg/kg)	5.09	7.61	9.49	6.54	7.32	
Uranium (U) (mg/kg)	3.97	3.93	4.37	4.59	3.85	
Vanadium (V) (mg/kg)	47.4	54.8	46.4	46.5	38.7	
Zinc (Zn) (mg/kg)	18400	4320	3740	3860	5160	
Zirconium (Zr) (mg/kg)	1.0	<1.0	<1.0	1.2	1.1	

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

13-AUG-19 10:06 (MT)

Version: FINAL

Sample ID Description Sampled Date Sampled Time Client ID	L2323048-6 Soil 31-JUL-19 09:00 BA1931-A-6	L2323048-7 Soil 31-JUL-19 09:00 BA1931-A-7	L2323048-8 Soil 31-JUL-19 09:00 BA1931-A-8	L2323048-9 Soil 31-JUL-19 09:00 BA1931-A-9	L2323048-10 Soil 31-JUL-19 09:00 BA1931-A-10	
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	14.5	12.7	13.9	16.1	15.9
	pH (1:2 soil:water) (pH)	10.58	10.65	10.73	10.54	10.63
Metals	Aluminum (Al) (mg/kg)	30400	37900	30000	31800	34300
	Antimony (Sb) (mg/kg)	132	124	108	155	125
	Arsenic (As) (mg/kg)	34.7	32.0	35.3	31.9	31.7
	Barium (Ba) (mg/kg)	435	517	548	431	429
	Beryllium (Be) (mg/kg)	0.39	0.39	0.38	0.33	0.35
	Bismuth (Bi) (mg/kg)	8.90	7.50	6.57	8.65	7.25
	Boron (B) (mg/kg)	225	221	215	207	489
	Cadmium (Cd) (mg/kg)	13.3	14.0	10.8	12.6	12.5
	Calcium (Ca) (mg/kg)	119000	119000	108000	111000	118000
	Chromium (Cr) (mg/kg)	198	127	134	150	241
	Cobalt (Co) (mg/kg)	26.5	30.4	21.4	26.7	53.6
	Copper (Cu) (mg/kg)	3250	2710	1880	13800	4370
	Iron (Fe) (mg/kg)	57400	45500	48400	47600	60900
	Lead (Pb) (mg/kg)	412	458	497	868	775
	Lithium (Li) (mg/kg)	19.2	18.2	22.5	16.3	16.0
	Magnesium (Mg) (mg/kg)	8850	10200	8300	9170	9430
	Manganese (Mn) (mg/kg)	755	689	719	628	855
	Mercury (Hg) (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Molybdenum (Mo) (mg/kg)	44.0	53.9	44.1	46.9	48.3
	Nickel (Ni) (mg/kg)	191	155	122	114	402
	Phosphorus (P) (mg/kg)	9630	10900	8330	9670	9100
	Potassium (K) (mg/kg)	5140	5170	4870	5290	5060
	Selenium (Se) (mg/kg)	0.39	0.36	0.34	0.34	0.35
	Silver (Ag) (mg/kg)	6.04	6.20	3.27	5.70	4.62
	Sodium (Na) (mg/kg)	13400	14300	14000	13500	14100
	Strontium (Sr) (mg/kg)	279	271	254	272	499
	Sulfur (S) (mg/kg)	14800	13200	12000	13400	13200
	Thallium (Tl) (mg/kg)	0.067	0.067	0.064	0.065	0.063
	Tin (Sn) (mg/kg)	143	262	102	99.7	143
	Titanium (Ti) (mg/kg)	719	976	1240	666	552
	Tungsten (W) (mg/kg)	9.95	12.3	5.83	8.17	7.17
	Uranium (U) (mg/kg)	4.92	4.75	4.46	4.87	4.60
	Vanadium (V) (mg/kg)	50.2	48.9	47.2	49.7	52.6
	Zinc (Zn) (mg/kg)	4320	3600	4860	3580	5200
	Zirconium (Zr) (mg/kg)	1.3	1.3	1.1	1.0	1.3

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2323048-11	L2323048-12			
		Description	Soil	Soil			
		Sampled Date	31-JUL-19	31-JUL-19			
		Sampled Time	09:00	09:00			
		Client ID	BA1931-A-11	BA1931-A-12			
Grouping	Analyte						
SOIL							
Physical Tests	Moisture (%)	15.5	12.4				
	pH (1:2 soil:water) (pH)	10.60	10.43				
Metals	Aluminum (Al) (mg/kg)	36900	33200				
	Antimony (Sb) (mg/kg)	144	121				
	Arsenic (As) (mg/kg)	40.5	33.2				
	Barium (Ba) (mg/kg)	430	431				
	Beryllium (Be) (mg/kg)	0.40	0.36				
	Bismuth (Bi) (mg/kg)	13.8	7.56				
	Boron (B) (mg/kg)	317	258				
	Cadmium (Cd) (mg/kg)	15.9	14.3				
	Calcium (Ca) (mg/kg)	129000	122000				
	Chromium (Cr) (mg/kg)	157	177				
	Cobalt (Co) (mg/kg)	38.6	22.5				
	Copper (Cu) (mg/kg)	5390	5580				
	Iron (Fe) (mg/kg)	51700	67300				
	Lead (Pb) (mg/kg)	600	2640				
	Lithium (Li) (mg/kg)	19.7	18.9				
	Magnesium (Mg) (mg/kg)	9580	10100				
	Manganese (Mn) (mg/kg)	802	798				
	Mercury (Hg) (mg/kg)	<0.050	<0.050				
	Molybdenum (Mo) (mg/kg)	56.2	38.0				
	Nickel (Ni) (mg/kg)	115	136				
	Phosphorus (P) (mg/kg)	12800	9750				
	Potassium (K) (mg/kg)	5600	5400				
	Selenium (Se) (mg/kg)	0.41	0.40				
	Silver (Ag) (mg/kg)	6.56	3.72				
	Sodium (Na) (mg/kg)	14400	15100				
	Strontium (Sr) (mg/kg)	381	280				
	Sulfur (S) (mg/kg)	15900	13700				
	Thallium (Tl) (mg/kg)	0.078	0.072				
	Tin (Sn) (mg/kg)	247	138				
	Titanium (Ti) (mg/kg)	593	666				
	Tungsten (W) (mg/kg)	10.8	7.22				
	Uranium (U) (mg/kg)	5.56	4.88				
Vanadium (V) (mg/kg)	54.1	45.2					
Zinc (Zn) (mg/kg)	4550	5650					
Zirconium (Zr) (mg/kg)	1.5	1.4					

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2323048-1	L2323048-2	L2323048-3	L2323048-4	L2323048-5
		Description	Soil	Soil	Soil	Soil	Soil
		Sampled Date	31-JUL-19	31-JUL-19	31-JUL-19	31-JUL-19	31-JUL-19
		Sampled Time	09:00	09:00	09:00	09:00	09:00
		Client ID	BA1931-A-1	BA1931-A-2	BA1931-A-3	BA1931-A-4	BA1931-A-5
Grouping	Analyte						
SOIL							
TCLP Metals	1st Preliminary pH (pH)		11.36	11.29	11.36	11.28	11.39
	2nd Preliminary pH (pH)		8.56	8.70	9.07	8.89	9.54
	Final pH (pH)		5.44	5.30	5.13	5.88	5.68
	Extraction Solution Initial pH (pH)		2.90	2.90	2.90	2.90	2.90
	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)		2.24	2.04	1.74	2.11	2.35
	Cadmium (Cd)-Leachable (mg/L)		0.257	0.319	0.241	0.192	0.225
	Calcium (Ca)-Leachable (mg/L)		1780	1570	1550	1810	1730
	Chromium (Cr)-Leachable (mg/L)		<0.25	<0.25	<0.25	<0.25	<0.25
	Cobalt (Co)-Leachable (mg/L)		0.850	0.505	0.205	1.46	0.515
	Copper (Cu)-Leachable (mg/L)		1.37	2.02	3.23	1.06	0.667
	Iron (Fe)-Leachable (mg/L)		8.7	13.3	58.1	6.0	<5.0
	Lead (Pb)-Leachable (mg/L)		<0.25	1.13	0.41	<0.25	0.30
	Magnesium (Mg)-Leachable (mg/L)		116	111	85.8	122	115
	Mercury (Hg)-Leachable (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Leachable (mg/L)		0.64	0.45	0.42	0.50	0.46
	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)		55.6	44.5	50.0	45.2	69.6

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2323048-6	L2323048-7	L2323048-8	L2323048-9	L2323048-10
		Description	Soil	Soil	Soil	Soil	Soil
		Sampled Date	31-JUL-19	31-JUL-19	31-JUL-19	31-JUL-19	31-JUL-19
		Sampled Time	09:00	09:00	09:00	09:00	09:00
		Client ID	BA1931-A-6	BA1931-A-7	BA1931-A-8	BA1931-A-9	BA1931-A-10
Grouping	Analyte						
SOIL							
TCLP Metals	1st Preliminary pH (pH)		11.33	11.38	11.36	11.41	11.39
	2nd Preliminary pH (pH)		9.58	9.05	8.97	8.82	8.91
	Final pH (pH)		6.17	5.62	5.77	5.60	5.95
	Extraction Solution Initial pH (pH)		2.90	2.90	2.90	2.90	2.90
	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)		2.65	2.28	2.31	2.26	2.56
	Cadmium (Cd)-Leachable (mg/L)		0.294	0.204	0.213	0.259	0.205
	Calcium (Ca)-Leachable (mg/L)		1950	1750	1790	1800	1860
	Chromium (Cr)-Leachable (mg/L)		<0.25	<0.25	<0.25	<0.25	<0.25
	Cobalt (Co)-Leachable (mg/L)		0.638	0.339	0.555	0.474	0.523
	Copper (Cu)-Leachable (mg/L)		1.38	0.292	2.07	2.12	2.42
	Iron (Fe)-Leachable (mg/L)		<5.0	<5.0	<5.0	11.1	<5.0
	Lead (Pb)-Leachable (mg/L)		<0.25	2.42	0.50	<0.25	<0.25
	Magnesium (Mg)-Leachable (mg/L)		126	113	122	129	122
	Mercury (Hg)-Leachable (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Leachable (mg/L)		0.48	0.48	0.51	0.46	0.81
	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)		51.8	57.1	61.3	51.3	56.9

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2323048-11	L2323048-12			
		Description	Soil	Soil			
		Sampled Date	31-JUL-19	31-JUL-19			
		Sampled Time	09:00	09:00			
		Client ID	BA1931-A-11	BA1931-A-12			
Grouping	Analyte						
SOIL							
TCLP Metals	1st Preliminary pH (pH)	11.44	11.35				
	2nd Preliminary pH (pH)	9.00	8.78				
	Final pH (pH)	5.63	5.73				
	Extraction Solution Initial pH (pH)	2.90	2.90				
	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)	2.17	2.45				
	Cadmium (Cd)-Leachable (mg/L)	0.197	0.245				
	Calcium (Ca)-Leachable (mg/L)	1710	1810				
	Chromium (Cr)-Leachable (mg/L)	<0.25	<0.25				
	Cobalt (Co)-Leachable (mg/L)	0.373	0.997				
	Copper (Cu)-Leachable (mg/L)	1.69	3.19				
	Iron (Fe)-Leachable (mg/L)	<5.0	7.7				
	Lead (Pb)-Leachable (mg/L)	<0.25	0.32				
	Magnesium (Mg)-Leachable (mg/L)	108	116				
	Mercury (Hg)-Leachable (mg/L)	<0.0010	<0.0010				
	Nickel (Ni)-Leachable (mg/L)	0.84	1.17				
	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)	87.5	58.5				

* 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)
Matrix Spike	Cadmium (Cd)-Leachable	MS-B	L2323048-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Leachable	MS-B	L2323048-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Cobalt (Co)-Leachable	MS-B	L2323048-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Zinc (Zn)-Leachable	MS-B	L2323048-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
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.



Ch



L2323048-COFC

COC #

Page ___ of ___

Report To			Report			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 Skrypyk			<input checked="" type="checkbox"/> PDF <input type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax <input type="radio"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT														
Address: 5150 Riverbend Drive			Email 1: smckinney@covanta.com			<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											
Burnaby BC			Email 2: rjohnson4@covanta.com														
Phone: 604-521-1025			Email 3: dskrypyk@covanta.com			Analysis Request											
<input type="checkbox"/> Yes <input type="checkbox"/> No			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-mm-yy)	Time (hh:mm)	Sample Type	MET-TCLP-VA (all metals, fig)	MOISTURE	Chrome 6	MET-CSR+FULL-VA (all metals)					Number of Containers	
BA1931-A-1		31-Jul-19	9:00	Soil	X	X		X						1
BA1931-A-2		31-Jul-19	9:00	Soil	X	X		X						1
BA1931-A-3		31-Jul-19	9:00	Soil	X	X		X						1
BA1931-A-4		31-Jul-19	9:00	Soil	X	X		X						1
BA1931-A-5		31-Jul-19	9:00	Soil	X	X		X						1
BA1931-A-6		31-Jul-19	9:00	Soil	X	X		X						1
BA1931-A-7		31-Jul-19	9:00	Soil	X	X		X						1
BA1931-A-8		31-Jul-19	9:00	Soil	X	X		X						1
BA1931-A-9		31-Jul-19	9:00	Soil	X	X		X						1
BA1931-A-10		31-Jul-19	9:00	Soil	X	X		X						1
BA1931-A-11		31-Jul-19	9:00	Soil	X	X		X						1
BA1931-A-12		31-Jul-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-mm-yy)	Time (hh:mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
[Signature]	6 Aug 19	0730	WA	8/6	12pm	21 °C				