

Bottom Ash Data

2019 Week 44

The following analytical report was sent to the Ministry of Environment and Climate Change Strategy on November 15, 2019. The data represents bottom ash composite results for week 44 of 2019 (October 27, 2019 to November 2, 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
ATTN: Steve McKinney
5150 Riverbend Drive
Burnaby BC V3N 4V3

Date Received: 05-NOV-19
Report Date: 13-NOV-19 17:04 (MT)
Version: FINAL

Client Phone: 604-521-1025

Certificate of Analysis

Lab Work Order #: L2377306
Project P.O. #: VANCO-0000048466
Job Reference:
C of C Numbers:
Legal Site Desc:

Brent Mack, B.Sc.
Account Manager

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ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
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ALS ENVIRONMENTAL ANALYTICAL REPORT

13-NOV-19 17:04 (MT)

Version: FINAL

Sample ID Description Sampled Date Sampled Time Client ID	L2377306-1 Soil 30-OCT-19 09:00 BA1944-A-1	L2377306-2 Soil 30-OCT-19 09:00 BA1944-A-2	L2377306-3 Soil 30-OCT-19 09:00 BA1944-A-3	L2377306-4 Soil 30-OCT-19 09:00 BA1944-A-4	L2377306-5 Soil 30-OCT-19 09:00 BA1944-A-5	
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	20.7	21.0	22.6	21.4	20.1
	pH (1:2 soil:water) (pH)	10.35	10.54	10.39	10.53	10.49
Metals	Aluminum (Al) (mg/kg)	38300	29700	32200	38700	26000
	Antimony (Sb) (mg/kg)	113	123	129	115	114
	Arsenic (As) (mg/kg)	22.6	22.5	27.0	21.2	21.2
	Barium (Ba) (mg/kg)	455	432	377	442	404
	Beryllium (Be) (mg/kg)	0.38	0.35	0.35	0.34	0.34
	Bismuth (Bi) (mg/kg)	8.76	9.51	10.8	10.5	9.49
	Boron (B) (mg/kg)	170	166	156	241	187
	Cadmium (Cd) (mg/kg)	13.5	15.3	13.6	14.3	22.3
	Calcium (Ca) (mg/kg)	120000	121000	117000	113000	117000
	Chromium (Cr) (mg/kg)	165	181	162	179	164
	Cobalt (Co) (mg/kg)	61.6	33.5	88.7	91.6	50.6
	Copper (Cu) (mg/kg)	1650	2090	1690	6420	2170
	Iron (Fe) (mg/kg)	55500	50700	58700	65600	64700
	Lead (Pb) (mg/kg)	3710	449	585	575	2420
	Lithium (Li) (mg/kg)	17.8	18.3	17.8	18.4	18.3
	Magnesium (Mg) (mg/kg)	9550	10100	9540	9690	9070
	Manganese (Mn) (mg/kg)	819	692	1470	780	746
	Mercury (Hg) (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
	Molybdenum (Mo) (mg/kg)	31.7	29.9	37.8	30.7	31.9
	Nickel (Ni) (mg/kg)	188	149	216	186	183
	Phosphorus (P) (mg/kg)	9390	9380	9150	8740	8320
	Potassium (K) (mg/kg)	4700	4480	4730	4350	4850
	Selenium (Se) (mg/kg)	0.31	0.38	0.35	0.33	0.31
	Silver (Ag) (mg/kg)	6.08	5.35	6.20	23.7	7.04
	Sodium (Na) (mg/kg)	12100	12600	12900	12600	12900
	Strontium (Sr) (mg/kg)	269	261	280	235	246
	Sulfur (S) (mg/kg)	12600	12800	13100	11100	12000
	Thallium (Tl) (mg/kg)	0.063	0.076	0.060	0.055	0.058
	Tin (Sn) (mg/kg)	114	148	138	172	124
	Titanium (Ti) (mg/kg)	682	427	427	394	295
	Tungsten (W) (mg/kg)	19.6	17.6	14.0	11.7	27.0
	Uranium (U) (mg/kg)	4.78	4.73	4.71	4.41	4.43
	Vanadium (V) (mg/kg)	43.2	44.8	48.2	41.7	40.8
	Zinc (Zn) (mg/kg)	3340	4620	4180	2910	5070
	Zirconium (Zr) (mg/kg)	2.3	1.4	1.7	2.0	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	L2377306-6 Soil 30-OCT-19 09:00 BA1944-A-6	L2377306-7 Soil 30-OCT-19 09:00 BA1944-A-7	L2377306-8 Soil 30-OCT-19 09:00 BA1944-A-8	L2377306-9 Soil 30-OCT-19 09:00 BA1944-A-9	L2377306-10 Soil 30-OCT-19 09:00 BA1944-A-10	
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	22.0	20.8	21.0	22.2	21.8
	pH (1:2 soil:water) (pH)	10.53	10.56	10.44	10.48	10.49
Metals	Aluminum (Al) (mg/kg)	35900	36600	29000	43300	38100
	Antimony (Sb) (mg/kg)	115	101	134	121	141
	Arsenic (As) (mg/kg)	22.0	20.3	21.4	21.7	23.9
	Barium (Ba) (mg/kg)	429	465	492	485	462
	Beryllium (Be) (mg/kg)	0.34	0.47	0.33	0.36	0.38
	Bismuth (Bi) (mg/kg)	10.9	7.78	12.7	8.32	11.2
	Boron (B) (mg/kg)	165	162	154	152	170
	Cadmium (Cd) (mg/kg)	15.1	11.2	13.0	11.9	16.3
	Calcium (Ca) (mg/kg)	119000	115000	111000	125000	125000
	Chromium (Cr) (mg/kg)	134	291	180	168	168
	Cobalt (Co) (mg/kg)	25.1	24.2	34.3	25.1	68.8
	Copper (Cu) (mg/kg)	1690	2350	19600	7700	24900
	Iron (Fe) (mg/kg)	52200	56100	62600	47000	51300
	Lead (Pb) (mg/kg)	4440	320	12300	401	361
	Lithium (Li) (mg/kg)	16.8	16.9	15.5	17.7	21.7
	Magnesium (Mg) (mg/kg)	9840	9280	8980	10100	9920
	Manganese (Mn) (mg/kg)	784	714	691	821	838
	Mercury (Hg) (mg/kg)	<0.050	<0.050	<0.050	<0.050	0.251
	Molybdenum (Mo) (mg/kg)	28.4	47.9	37.6	35.1	33.7
	Nickel (Ni) (mg/kg)	201	237	260	221	528
	Phosphorus (P) (mg/kg)	9140	7900	9410	11200	11000
	Potassium (K) (mg/kg)	4800	4450	4320	5110	5090
	Selenium (Se) (mg/kg)	0.37	0.35	0.35	0.35	0.54
	Silver (Ag) (mg/kg)	8.71	4.93	13.6	5.16	10.8
	Sodium (Na) (mg/kg)	12500	12700	12500	14400	13200
	Strontium (Sr) (mg/kg)	248	243	250	286	267
	Sulfur (S) (mg/kg)	13000	12300	11900	12400	12800
	Thallium (Tl) (mg/kg)	0.062	0.056	0.087	0.060	0.063
	Tin (Sn) (mg/kg)	95.9	107	545	104	216
	Titanium (Ti) (mg/kg)	402	545	370	476	516
	Tungsten (W) (mg/kg)	16.6	10.3	13.1	11.9	14.6
	Uranium (U) (mg/kg)	4.54	4.20	4.19	4.54	4.95
	Vanadium (V) (mg/kg)	41.4	53.0	41.0	44.4	43.2
	Zinc (Zn) (mg/kg)	3680	3390	13900	5270	4070
	Zirconium (Zr) (mg/kg)	1.7	1.9	1.5	2.2	1.6

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2377306-11	L2377306-12		
		Description	Soil	Soil		
		Sampled Date	30-OCT-19	30-OCT-19		
		Sampled Time	09:00	09:00		
		Client ID	BA1944-A-11	BA1944-A-12		
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)	21.9	21.8			
	pH (1:2 soil:water) (pH)	10.47	10.53			
Metals	Aluminum (Al) (mg/kg)	26700	30200			
	Antimony (Sb) (mg/kg)	132	129			
	Arsenic (As) (mg/kg)	22.7	25.4			
	Barium (Ba) (mg/kg)	464	525			
	Beryllium (Be) (mg/kg)	0.32	0.39			
	Bismuth (Bi) (mg/kg)	9.52	10.1			
	Boron (B) (mg/kg)	177	170			
	Cadmium (Cd) (mg/kg)	15.6	13.2			
	Calcium (Ca) (mg/kg)	129000	131000			
	Chromium (Cr) (mg/kg)	143	184			
	Cobalt (Co) (mg/kg)	34.3	28.1			
	Copper (Cu) (mg/kg)	17400	2770			
	Iron (Fe) (mg/kg)	46400	48600			
	Lead (Pb) (mg/kg)	400	582			
	Lithium (Li) (mg/kg)	17.0	17.2			
	Magnesium (Mg) (mg/kg)	10200	11000			
	Manganese (Mn) (mg/kg)	648	791			
	Mercury (Hg) (mg/kg)	<0.050	<0.050			
	Molybdenum (Mo) (mg/kg)	30.9	35.6			
	Nickel (Ni) (mg/kg)	138	189			
	Phosphorus (P) (mg/kg)	11000	10100			
	Potassium (K) (mg/kg)	4570	5350			
	Selenium (Se) (mg/kg)	0.40	0.40			
	Silver (Ag) (mg/kg)	5.36	7.57			
	Sodium (Na) (mg/kg)	12400	13800			
	Strontium (Sr) (mg/kg)	267	319			
	Sulfur (S) (mg/kg)	11900	13900			
	Thallium (Tl) (mg/kg)	0.054	0.077			
	Tin (Sn) (mg/kg)	111	141			
	Titanium (Ti) (mg/kg)	459	663			
	Tungsten (W) (mg/kg)	18.5	23.3			
	Uranium (U) (mg/kg)	4.92	5.76			
Vanadium (V) (mg/kg)	41.4	45.9				
Zinc (Zn) (mg/kg)	3410	7150				
Zirconium (Zr) (mg/kg)	1.4	1.7				

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2377306-1	L2377306-2	L2377306-3	L2377306-4	L2377306-5
		Description	Soil	Soil	Soil	Soil	Soil
		Sampled Date	30-OCT-19	30-OCT-19	30-OCT-19	30-OCT-19	30-OCT-19
		Sampled Time	09:00	09:00	09:00	09:00	09:00
		Client ID	BA1944-A-1	BA1944-A-2	BA1944-A-3	BA1944-A-4	BA1944-A-5
Grouping	Analyte						
SOIL							
TCLP Metals	1st Preliminary pH (pH)		11.53	11.49	11.57	11.49	11.54
	2nd Preliminary pH (pH)		8.81	8.63	8.50	8.90	9.01
	Final pH (pH)		6.27	6.29	6.32	6.46	6.39
	Extraction Solution Initial pH (pH)		2.92	2.92	2.92	2.92	2.92
	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)		2.74	2.34	2.67	2.44	2.24
	Cadmium (Cd)-Leachable (mg/L)		0.189	0.282	0.230	0.164	0.313
	Calcium (Ca)-Leachable (mg/L)		2170	2140	2250	2070	1990
	Chromium (Cr)-Leachable (mg/L)		<0.25	<0.25	<0.25	<0.25	<0.25
	Cobalt (Co)-Leachable (mg/L)		0.409	0.795	0.469	0.468	0.460
	Copper (Cu)-Leachable (mg/L)		0.719	1.10	0.570	0.628	0.340
	Iron (Fe)-Leachable (mg/L)		<5.0	<5.0	<5.0	<5.0	<5.0
	Lead (Pb)-Leachable (mg/L)		0.54	<0.25	<0.25	0.34	<0.25
	Magnesium (Mg)-Leachable (mg/L)		130	119	129	122	123
	Mercury (Hg)-Leachable (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Leachable (mg/L)		1.16	0.62	0.69	0.54	0.61
	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)		32.2	30.1	35.0	28.8	24.3

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L2377306-6	L2377306-7	L2377306-8	L2377306-9	L2377306-10
		Description	Soil	Soil	Soil	Soil	Soil
		Sampled Date	30-OCT-19	30-OCT-19	30-OCT-19	30-OCT-19	30-OCT-19
		Sampled Time	09:00	09:00	09:00	09:00	09:00
		Client ID	BA1944-A-6	BA1944-A-7	BA1944-A-8	BA1944-A-9	BA1944-A-10
Grouping	Analyte						
SOIL							
TCLP Metals	1st Preliminary pH (pH)		11.53	11.60	11.50	11.57	11.50
	2nd Preliminary pH (pH)		8.81	8.48	8.49	8.56	8.21
	Final pH (pH)		6.19	6.17	6.12	6.16	6.19
	Extraction Solution Initial pH (pH)		2.92	2.92	2.92	2.92	2.92
	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)		2.78	2.65	2.72	2.42	2.35
	Cadmium (Cd)-Leachable (mg/L)		0.219	0.556	0.326	0.228	0.221
	Calcium (Ca)-Leachable (mg/L)		2420	2240	2270	2210	2000
	Chromium (Cr)-Leachable (mg/L)		<0.25	<0.25	<0.25	<0.25	<0.25
	Cobalt (Co)-Leachable (mg/L)		0.935	0.619	0.790	0.405	0.586
	Copper (Cu)-Leachable (mg/L)		1.42	0.642	1.16	1.32	0.506
	Iron (Fe)-Leachable (mg/L)		<5.0	<5.0	<5.0	<5.0	<5.0
	Lead (Pb)-Leachable (mg/L)		<0.25	<0.25	0.46	<0.25	<0.25
	Magnesium (Mg)-Leachable (mg/L)		149	145	137	133	126
	Mercury (Hg)-Leachable (mg/L)		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Leachable (mg/L)		0.57	0.73	0.65	0.62	0.69
	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)		43.8	48.1	47.4	38.2	37.3

* 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	L2377306-11 Soil 30-OCT-19 09:00 BA1944-A-11	L2377306-12 Soil 30-OCT-19 09:00 BA1944-A-12		
Grouping	Analyte				
SOIL					
TCLP Metals	1st Preliminary pH (pH)	11.54	11.47		
	2nd Preliminary pH (pH)	8.30	8.52		
	Final pH (pH)	6.03	6.06		
	Extraction Solution Initial pH (pH)	2.92	2.92		
	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)	2.64	2.30		
	Cadmium (Cd)-Leachable (mg/L)	0.229	0.237		
	Calcium (Ca)-Leachable (mg/L)	2100	2040		
	Chromium (Cr)-Leachable (mg/L)	<0.25	<0.25		
	Cobalt (Co)-Leachable (mg/L)	0.879	0.567		
	Copper (Cu)-Leachable (mg/L)	1.45	1.14		
	Iron (Fe)-Leachable (mg/L)	<5.0	<5.0		
	Lead (Pb)-Leachable (mg/L)	<0.25	<0.25		
	Magnesium (Mg)-Leachable (mg/L)	131	125		
	Mercury (Hg)-Leachable (mg/L)	<0.0010	<0.0010		
	Nickel (Ni)-Leachable (mg/L)	2.02	0.58		
	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)	41.8	41.2		

* 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	Calcium (Ca)-Leachable	MS-B	L2377306-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Cobalt (Co)-Leachable	MS-B	L2377306-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Zinc (Zn)-Leachable	MS-B	L2377306-1, -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, 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.



Report To		Report Format / Distribution		Turnaround Time 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 Skrypnik	<input checked="" type="checkbox"/> PDF	<input type="checkbox"/> Excel	<input type="checkbox"/> Digital	<input type="checkbox"/> Fax	
Address:	5150 Riverbend Drive Burnaby BC	Email 1:	smckinney@covanta.com		<input type="radio"/> Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT	
Phone:	604-521-1025	Email 2:	rjohnson4@covanta.com		<input type="radio"/> Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT	
	<input type="checkbox"/> Yes <input type="checkbox"/> No	Email 3:	dskrypnik@covanta.com		<input type="radio"/> Same Day or Weekend Emergency - Contact ALS to Confirm TAT	
			brent.kirkpatrick@metrovancover.org		Analysis Request	
			Sarah.Wellman@metrovancover.org			

Invoice To		Client / Project Information		Please indicate below Filtered, Preserved or both (F, P, F/P)					
Same as Report ?		Job #:							
Hardcopy of Invoice with Report? <input type="checkbox"/> Yes <input type="checkbox"/> No		PO / AFE: PO# 46693 Weekly Bottom Ash - Suite							
Company:		LSD: (includes 2:1 pH)							
Contact:		Quote #:							
Address:		ALS Contact:							
Phone:		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			
BA1944-A-1		30-Oct-19	9:00	Soil	X	X		X				1
BA1944-A-2		30-Oct-19	9:00	Soil	X	X		X				1
BA1944-A-3		30-Oct-19	9:00	Soil	X	X		X				1
BA1944-A-4		30-Oct-19	9:00	Soil	X	X		X				1
BA1944-A-5		30-Oct-19	9:00	Soil	X	X		X				1
BA1944-A-6		30-Oct-19	9:00	Soil	X	X		X				1
BA1944-A-7		30-Oct-19	9:00	Soil	X	X		X				1
BA1944-A-8		30-Oct-19	9:00	Soil	X	X		X				1
BA1944-A-9		30-Oct-19	9:00	Soil	X	X		X				1
BA1944-A-10		30-Oct-19	9:00	Soil	X	X		X				1
BA1944-A-11		30-Oct-19	9:00	Soil	X	X		X				1
BA1944-A-12		30-Oct-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:
[Signature]	5-Nov-19	0800	JG	5 Nov 19	11:40 PM	17.2°C				Yes / No ? If Yes add SIF