Bottom Ash Data

2020 Week 3

The following analytical report was sent to the Ministry of Environment and Climate Change Strategy on January 29, 2020. The data represents bottom ash composite results for week 3 of 2020 (January 12, 2020 to January 18, 2020).

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

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **VA20A0569**	Page	: 1 of 11
Client	: **Covanta Burnaby R.E., ULC**	Laboratory	: Vancouver - Environmental
Contact	: Steve McKinney	Account Manager	: Brent Mack
Address	: 5150 Riverbend Drive Burnaby BC Canada V3N 4V3	Address	: 8081 Lougheed Highway Burnaby BC Canada V5A 1W9
Telephone	: 604 521 1025	Telephone	: +1 604 253 4188
Project	: ----	Date Samples Received	: 21-Jan-2020 11:55
PO	: VANCO 0000049378	Date Analysis Commenced	: 21-Jan-2020
C-O-C number	: ----	Issue Date	: 28-Jan-2020 13:35
Sampler	: ----		
Site	: ----		
Quote number	: Standing Offer		
No. of samples received	: 12		
No. of samples analysed	: 12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Aaron Yu	Laboratory Analyst	Metals, Burnaby, British Columbia
Brieanna Allen	Department Manager - Organics	Organics, Burnaby, British Columbia
Cristina Alexandre	Supervisor - Metals ICP Instrumentation	Metals, Burnaby, British Columbia
Cristina Alexandre	Supervisor - Metals ICP Instrumentation	Organics, Burnaby, British Columbia
Dee Lee	Analsyt	Metals, Burnaby, British Columbia
Mae Soropia	Lab Analyst	Metals, Burnaby, British Columbia

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

Unit	*Description*
%	percent
mg/kg	milligrams per kilogram
mg/L	milligrams per litre
pH units	pH units

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior 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.

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

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in reports identified as "Preliminary Report" are considered authorized for use.

Analytical Results

Sub-Matrix: **Solid**
(Matrix: **Soil**)

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2003-A-1	BA2003-A-2	BA2003-A-3	BA2003-A-4	BA2003-A-5
					Client sampling date / time	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00
						VA20A0569-001	VA20A0569-002	VA20A0569-003	VA20A0569-004	VA20A0569-005
						Result	Result	Result	Result	Result
Physical Tests										
moisture	----	E144	0.25	%		23.1	25.8	25.4	24.6	23.6
pH (1:2 soil:water)	----	E108	0.10	pH units		12.0	11.8	11.8	11.8	12.0
Metals										
aluminum	7429-90-5	E440	50	mg/kg		66600	41700	48100	30500	35200
antimony	7440-36-0	E440	0.10	mg/kg		79.4	87.1	74.4	124	109
arsenic	7440-38-2	E440	0.10	mg/kg		12.1	13.5	10.9	11.1	12.0
barium	7440-39-3	E440	0.50	mg/kg		654	557	582	686	709
beryllium	7440-41-7	E440	0.10	mg/kg		0.47	0.38	0.39	0.34	0.44
bismuth	7440-69-9	E440	0.20	mg/kg		5.79	5.46	4.63	6.19	5.81
boron	7440-42-8	E440	5.0	mg/kg		188	175	257	206	199
cadmium	7440-43-9	E440	0.020	mg/kg		18.9	8.73	9.32	8.91	9.71
calcium	7440-70-2	E440	50	mg/kg		124000	127000	127000	121000	127000
chromium	7440-47-3	E440	0.50	mg/kg		129	105	124	111	145
cobalt	7440-48-4	E440	0.10	mg/kg		17.0	20.0	26.7	162	31.2
copper	7440-50-8	E440	0.50	mg/kg		2330	3120	3990	5940	3060
iron	7439-89-6	E440	50	mg/kg		44300	47000	48700	56900	60800
lead	7439-92-1	E440	0.50	mg/kg		298	302	269	488	301
lithium	7439-93-2	E440	2.0	mg/kg		17.9	18.5	19.6	27.2	18.0
magnesium	7439-95-4	E440	20	mg/kg		10200	10900	12000	10600	11400
manganese	7439-96-5	E440	1.0	mg/kg		758	648	653	1090	643
mercury	7439-97-6	E510	0.0500	mg/kg		0.146	<0.0500	<0.0500	<0.0500	<0.0500
molybdenum	7439-98-7	E440	0.10	mg/kg		33.4	20.2	15.8	21.4	24.2
nickel	7440-02-0	E440	0.50	mg/kg		166	92.0	121	79.3	104
phosphorus	7723-14-0	E440	50	mg/kg		11700	10900	10500	10600	11700
potassium	7440-09-7	E440	100	mg/kg		4380	4510	4110	3990	4290
selenium	7782-49-2	E440	0.20	mg/kg		0.37	0.27	0.27	0.33	0.34
silver	7440-22-4	E440	0.10	mg/kg		6.17	3.04	3.24	3.08	3.95
sodium	7440-23-5	E440	50	mg/kg		13200	12900	13300	12700	13300
strontium	7440-24-6	E440	0.50	mg/kg		287	277	280	288	322
sulfur	7704-34-9	E440	1000	mg/kg		10100	9700	9400	9600	9600

Analytical Results

Sub-Matrix: **Solid**
(Matrix: **Soil**)

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2003-A-1	BA2003-A-2	BA2003-A-3	BA2003-A-4	BA2003-A-5
					Client sampling date / time	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00
						VA20A0569-001	VA20A0569-002	VA20A0569-003	VA20A0569-004	VA20A0569-005
						Result	Result	Result	Result	Result
Metals										
thallium	7440-28-0	E440	0.050	mg/kg		0.058	0.058	0.115	0.054	0.062
tin	7440-31-5	E440	2.0	mg/kg		108	246	82.9	143	96.0
titanium	7440-32-6	E440	1.0	mg/kg		1740	1010	1350	1130	1340
tungsten	7440-33-7	E440	0.50	mg/kg		12.5	9.28	12.3	11.2	10.8
uranium	7440-61-1	E440	0.050	mg/kg		4.69	5.05	4.55	4.56	4.71
vanadium	7440-62-2	E440	0.20	mg/kg		40.8	41.2	39.2	35.6	38.0
zinc	7440-66-6	E440	2.0	mg/kg		3290	4360	4940	2660	3550
zirconium	7440-67-7	E440	1.0	mg/kg		14.0	3.7	6.7	2.4	2.6
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444	0.010	pH units		11.6	11.6	11.6	11.6	11.7
pH, TCLP 2nd preliminary	----	EPP444	0.010	pH units		9.20	9.66	9.25	8.93	8.85
pH, TCLP extraction fluid initial	----	EPP444	0.010	pH units		2.87	2.87	2.87	2.87	2.87
pH, TCLP final	----	EPP444	0.010	pH units		6.22	6.09	5.97	5.94	6.06
antimony, TCLP	7440-36-0	E444	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
arsenic, TCLP	7440-38-2	E444	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
barium, TCLP	7440-39-3	E444	2.5	mg/L		<2.5	<2.5	<2.5	<2.5	<2.5
beryllium, TCLP	7440-41-7	E444	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
boron, TCLP	7440-42-8	E444	0.50	mg/L		3.04	2.77	3.81	2.93	2.81
cadmium, TCLP	7440-43-9	E444	0.050	mg/L		0.170	0.278	0.141	0.134	0.131
calcium, TCLP	7440-70-2	E444	2.0	mg/L		2200	2160	2120	2000	1970
chromium, TCLP	7440-47-3	E444	0.25	mg/L		<0.25	<0.25	<0.25	<0.25	<0.25
cobalt, TCLP	7440-48-4	E444	0.050	mg/L		0.574	1.00	2.14	0.672	1.47
copper, TCLP	7440-50-8	E444	0.050	mg/L		1.54	1.01	1.32	1.26	2.36
iron, TCLP	7439-89-6	E444	5.0	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0
lead, TCLP	7439-92-1	E444	0.25	mg/L		<0.25	<0.25	<0.25	<0.25	<0.25
magnesium, TCLP	7439-95-4	E444	0.50	mg/L		155	156	178	139	125
mercury, TCLP	7439-97-6	E512	0.0100	mg/L		<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
nickel, TCLP	7440-02-0	E444	0.25	mg/L		0.62	0.42	0.55	0.45	0.35
selenium, TCLP	7782-49-2	E444	1.00	mg/L		<1.00	<1.00	<1.00	<1.00	<1.00
silver, TCLP	7440-22-4	E444	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
thallium, TCLP	7440-28-0	E444	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0

Analytical Results

Sub-Matrix: **Solid**
(Matrix: **Soil**)

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2003-A-1	BA2003-A-2	BA2003-A-3	BA2003-A-4	BA2003-A-5
					Client sampling date / time	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00
						VA20A0569-001	VA20A0569-002	VA20A0569-003	VA20A0569-004	VA20A0569-005
						Result	Result	Result	Result	Result
TCLP Metals										
vanadium, TCLP	7440-62-2	E444	0.15	mg/L		<0.15	<0.15	<0.15	<0.15	<0.15
zinc, TCLP	7440-66-6	E444	0.50	mg/L		42.8	38.5	43.8	39.1	58.3

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: **Solid**
(Matrix: **Soil**)

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2003-A-6	BA2003-A-7	BA2003-A-8	BA2003-A-9	BA2003-A-10
					Client sampling date / time	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00
						VA20A0569-006	VA20A0569-007	VA20A0569-008	VA20A0569-009	VA20A0569-010
						Result	Result	Result	Result	Result
Physical Tests										
moisture	----	E144	0.25	%		25.0	24.3	25.6	21.1	25.4
pH (1:2 soil:water)	----	E108	0.10	pH units		11.8	12.0	11.6	12.0	11.6
Metals										
aluminum	7429-90-5	E440	50	mg/kg		43700	39300	29600	34200	43600
antimony	7440-36-0	E440	0.10	mg/kg		107	75.7	92.8	104	99.6
arsenic	7440-38-2	E440	0.10	mg/kg		15.9	10.6	11.8	14.5	14.1
barium	7440-39-3	E440	0.50	mg/kg		722	606	580	539	495
beryllium	7440-41-7	E440	0.10	mg/kg		0.35	0.34	0.36	0.37	0.41
bismuth	7440-69-9	E440	0.20	mg/kg		4.82	5.22	5.45	6.89	12.5
boron	7440-42-8	E440	5.0	mg/kg		308	200	326	286	408
cadmium	7440-43-9	E440	0.020	mg/kg		8.92	8.69	9.24	9.88	14.8
calcium	7440-70-2	E440	50	mg/kg		121000	120000	124000	137000	141000
chromium	7440-47-3	E440	0.50	mg/kg		211	114	131	138	141
cobalt	7440-48-4	E440	0.10	mg/kg		31.2	124	789	20.1	117
copper	7440-50-8	E440	0.50	mg/kg		15400	1570	7530	7150	30900
iron	7439-89-6	E440	50	mg/kg		50500	46400	55100	55100	57100
lead	7439-92-1	E440	0.50	mg/kg		711	362	450	286	434
lithium	7439-93-2	E440	2.0	mg/kg		20.1	16.6	51.9	18.2	30.8
magnesium	7439-95-4	E440	20	mg/kg		9420	9590	10400	10100	12300
manganese	7439-96-5	E440	1.0	mg/kg		914	973	640	684	760
mercury	7439-97-6	E510	0.0500	mg/kg		<0.0500	<0.0500	<0.0500	0.0609	<0.0500
molybdenum	7439-98-7	E440	0.10	mg/kg		36.4	16.0	21.1	40.8	20.7
nickel	7440-02-0	E440	0.50	mg/kg		1090	93.9	114	179	458
phosphorus	7723-14-0	E440	50	mg/kg		10700	12300	11100	10800	11500
potassium	7440-09-7	E440	100	mg/kg		3950	3940	4500	4460	4930
selenium	7782-49-2	E440	0.20	mg/kg		0.30	0.24	0.29	0.25	0.40
silver	7440-22-4	E440	0.10	mg/kg		5.88	5.28	3.43	4.16	23.9
sodium	7440-23-5	E440	50	mg/kg		12600	12100	13900	14200	14400
strontium	7440-24-6	E440	0.50	mg/kg		288	271	286	735	284
sulfur	7704-34-9	E440	1000	mg/kg		9300	9300	10500	12400	11600
thallium	7440-28-0	E440	0.050	mg/kg		0.088	0.074	<0.050	0.057	0.058

Analytical Results

Sub-Matrix: **Solid**
(Matrix: **Soil**)

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2003-A-6	BA2003-A-7	BA2003-A-8	BA2003-A-9	BA2003-A-10
					Client sampling date / time	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00
						VA20A0569-006	VA20A0569-007	VA20A0569-008	VA20A0569-009	VA20A0569-010
						Result	Result	Result	Result	Result
Metals										
tin	7440-31-5	E440	2.0	mg/kg		96.6	106	96.6	105	196
titanium	7440-32-6	E440	1.0	mg/kg		1180	964	459	564	910
tungsten	7440-33-7	E440	0.50	mg/kg		13.5	8.67	10.3	11.9	8.96
uranium	7440-61-1	E440	0.050	mg/kg		4.38	4.38	4.77	5.12	5.44
vanadium	7440-62-2	E440	0.20	mg/kg		39.1	35.9	37.1	37.3	41.7
zinc	7440-66-6	E440	2.0	mg/kg		16600	13500	3790	3360	3560
zirconium	7440-67-7	E440	1.0	mg/kg		2.2	3.0	1.7	2.2	1.9
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444	0.010	pH units		11.7	11.8	11.6	11.7	11.6
pH, TCLP 2nd preliminary	----	EPP444	0.010	pH units		8.72	9.18	8.25	8.39	7.84
pH, TCLP extraction fluid initial	----	EPP444	0.010	pH units		2.87	2.87	2.87	2.87	2.87
pH, TCLP final	----	EPP444	0.010	pH units		6.08	6.00	6.05	5.99	6.09
antimony, TCLP	7440-36-0	E444	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
arsenic, TCLP	7440-38-2	E444	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
barium, TCLP	7440-39-3	E444	2.5	mg/L		<2.5	<2.5	<2.5	<2.5	<2.5
beryllium, TCLP	7440-41-7	E444	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
boron, TCLP	7440-42-8	E444	0.50	mg/L		3.88	2.97	2.99	3.12	2.98
cadmium, TCLP	7440-43-9	E444	0.050	mg/L		0.414	0.299	0.156	0.318	0.166
calcium, TCLP	7440-70-2	E444	2.0	mg/L		2080	2030	2120	2220	2150
chromium, TCLP	7440-47-3	E444	0.25	mg/L		<0.25	<0.25	<0.25	<0.25	<0.25
cobalt, TCLP	7440-48-4	E444	0.050	mg/L		1.09	1.72	0.990	1.22	0.937
copper, TCLP	7440-50-8	E444	0.050	mg/L		0.917	1.31	1.44	1.82	0.950
iron, TCLP	7439-89-6	E444	5.0	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0
lead, TCLP	7439-92-1	E444	0.25	mg/L		<0.25	<0.25	<0.25	0.74	<0.25
magnesium, TCLP	7439-95-4	E444	0.50	mg/L		155	144	154	153	157
mercury, TCLP	7439-97-6	E512	0.0100	mg/L		<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
nickel, TCLP	7440-02-0	E444	0.25	mg/L		0.45	0.55	0.39	0.46	0.45
selenium, TCLP	7782-49-2	E444	1.00	mg/L		<1.00	<1.00	<1.00	<1.00	<1.00
silver, TCLP	7440-22-4	E444	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
thallium, TCLP	7440-28-0	E444	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
vanadium, TCLP	7440-62-2	E444	0.15	mg/L		<0.15	<0.15	<0.15	<0.15	<0.15

Analytical Results

Sub-Matrix: **Solid** (Matrix: **Soil**)					Client sample ID	BA2003-A-6	BA2003-A-7	BA2003-A-8	BA2003-A-9	BA2003-A-10
					Client sampling date / time	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00	15-Jan-2020 09:00
Analyte	*CAS Number*	*Method*	*LOR*	*Unit*		**VA20A0569-006**	**VA20A0569-007**	**VA20A0569-008**	**VA20A0569-009**	**VA20A0569-010**
						Result	Result	Result	Result	Result
TCLP Metals										
zinc, TCLP	7440-66-6	E444	0.50	mg/L		36.9	42.2	34.6	59.5	38.5

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: **Solid**
(Matrix: **Soil**)

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2003-A-11	BA2003-A-12	----	----	----
					Client sampling date / time	15-Jan-2020 09:00	15-Jan-2020 09:00	----	----	----
						VA20A0569-011	VA20A0569-012	--------	--------	--------
						Result	Result	----	----	----
Physical Tests										
moisture	----	E144	0.25	%		24.2	29.0	----	----	----
pH (1:2 soil:water)	----	E108	0.10	pH units		11.6	12.0	----	----	----
Metals										
aluminum	7429-90-5	E440	50	mg/kg		49800	34000	----	----	----
antimony	7440-36-0	E440	0.10	mg/kg		106	91.0	----	----	----
arsenic	7440-38-2	E440	0.10	mg/kg		16.0	11.9	----	----	----
barium	7440-39-3	E440	0.50	mg/kg		571	716	----	----	----
beryllium	7440-41-7	E440	0.10	mg/kg		0.39	36.1	----	----	----
bismuth	7440-69-9	E440	0.20	mg/kg		6.14	5.19	----	----	----
boron	7440-42-8	E440	5.0	mg/kg		205	164	----	----	----
cadmium	7440-43-9	E440	0.020	mg/kg		10.5	11.2	----	----	----
calcium	7440-70-2	E440	50	mg/kg		140000	129000	----	----	----
chromium	7440-47-3	E440	0.50	mg/kg		256	139	----	----	----
cobalt	7440-48-4	E440	0.10	mg/kg		31.0	98.4	----	----	----
copper	7440-50-8	E440	0.50	mg/kg		2820	12000	----	----	----
iron	7439-89-6	E440	50	mg/kg		58700	54600	----	----	----
lead	7439-92-1	E440	0.50	mg/kg		294	525	----	----	----
lithium	7439-93-2	E440	2.0	mg/kg		21.3	21.8	----	----	----
magnesium	7439-95-4	E440	20	mg/kg		10700	13300	----	----	----
manganese	7439-96-5	E440	1.0	mg/kg		1180	784	----	----	----
mercury	7439-97-6	E510	0.0500	mg/kg		<0.0500	0.0640	----	----	----
molybdenum	7439-98-7	E440	0.10	mg/kg		20.6	16.2	----	----	----
nickel	7440-02-0	E440	0.50	mg/kg		191	97.7	----	----	----
phosphorus	7723-14-0	E440	50	mg/kg		12900	10700	----	----	----
potassium	7440-09-7	E440	100	mg/kg		4740	4610	----	----	----
selenium	7782-49-2	E440	0.20	mg/kg		0.26	0.52	----	----	----
silver	7440-22-4	E440	0.10	mg/kg		4.22	9.96	----	----	----
sodium	7440-23-5	E440	50	mg/kg		15400	14200	----	----	----
strontium	7440-24-6	E440	0.50	mg/kg		406	326	----	----	----
sulfur	7704-34-9	E440	1000	mg/kg		11400	9600	----	----	----
thallium	7440-28-0	E440	0.050	mg/kg		0.063	0.063	----	----	----

Analytical Results

Sub-Matrix: **Solid**
(Matrix: **Soil**)

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2003-A-11	BA2003-A-12	----	----	----
					Client sampling date / time	15-Jan-2020 09:00	15-Jan-2020 09:00	----	----	----
						VA20A0569-011	VA20A0569-012	--------	--------	--------
						Result	Result	----	----	----
Metals										
tin	7440-31-5	E440	2.0	mg/kg		151	140	----	----	----
titanium	7440-32-6	E440	1.0	mg/kg		760	1490	----	----	----
tungsten	7440-33-7	E440	0.50	mg/kg		11.6	11.0	----	----	----
uranium	7440-61-1	E440	0.050	mg/kg		5.19	4.89	----	----	----
vanadium	7440-62-2	E440	0.20	mg/kg		43.2	37.4	----	----	----
zinc	7440-66-6	E440	2.0	mg/kg		2940	7360	----	----	----
zirconium	7440-67-7	E440	1.0	mg/kg		3.6	3.3	----	----	----
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444	0.010	pH units		11.6	11.7	----	----	----
pH, TCLP 2nd preliminary	----	EPP444	0.010	pH units		8.15	8.59	----	----	----
pH, TCLP extraction fluid initial	----	EPP444	0.010	pH units		2.87	2.87	----	----	----
pH, TCLP final	----	EPP444	0.010	pH units		6.05	6.03	----	----	----
antimony, TCLP	7440-36-0	E444	1.0	mg/L		<1.0	<1.0	----	----	----
arsenic, TCLP	7440-38-2	E444	1.0	mg/L		<1.0	<1.0	----	----	----
barium, TCLP	7440-39-3	E444	2.5	mg/L		<2.5	<2.5	----	----	----
beryllium, TCLP	7440-41-7	E444	0.025	mg/L		<0.025	<0.025	----	----	----
boron, TCLP	7440-42-8	E444	0.50	mg/L		2.94	2.55	----	----	----
cadmium, TCLP	7440-43-9	E444	0.050	mg/L		0.188	0.192	----	----	----
calcium, TCLP	7440-70-2	E444	2.0	mg/L		2140	2100	----	----	----
chromium, TCLP	7440-47-3	E444	0.25	mg/L		<0.25	<0.25	----	----	----
cobalt, TCLP	7440-48-4	E444	0.050	mg/L		0.849	0.871	----	----	----
copper, TCLP	7440-50-8	E444	0.050	mg/L		1.34	1.55	----	----	----
iron, TCLP	7439-89-6	E444	5.0	mg/L		<5.0	<5.0	----	----	----
lead, TCLP	7439-92-1	E444	0.25	mg/L		<0.25	0.63	----	----	----
magnesium, TCLP	7439-95-4	E444	0.50	mg/L		162	145	----	----	----
mercury, TCLP	7439-97-6	E512	0.0100	mg/L		<0.0100	<0.0100	----	----	----
nickel, TCLP	7440-02-0	E444	0.25	mg/L		0.52	0.41	----	----	----
selenium, TCLP	7782-49-2	E444	1.00	mg/L		<1.00	<1.00	----	----	----
silver, TCLP	7440-22-4	E444	0.050	mg/L		<0.050	<0.050	----	----	----
thallium, TCLP	7440-28-0	E444	1.0	mg/L		<1.0	<1.0	----	----	----
vanadium, TCLP	7440-62-2	E444	0.15	mg/L		<0.15	<0.15	----	----	----

Analytical Results

Sub-Matrix: **Solid** (Matrix: **Soil**)					Client sample ID	**BA2003-A-11**	**BA2003-A-12**	**----**	**----**	**----**
					Client sampling date / time	15-Jan-2020 09:00	15-Jan-2020 09:00	----	----	----
Analyte	*CAS Number*	*Method*	*LOR*	*Unit*		**VA20A0569-011**	**VA20A0569-012**	**--------**	**--------**	**--------**
						Result	Result	----	----	----
TCLP Metals										
zinc, TCLP	7440-66-6	E444	0.50	mg/L		63.8	46.0	----	----	----

Please refer to the General Comments section for an explanation of any qualifiers detected.