

## Bottom Ash Data

### 2020 Week 6

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The following analytical report was sent to the Ministry of Environment and Climate Change Strategy on February 19, 2020. The data represents bottom ash composite results for week 6 of 2020 (February 2, 2020 to February 8, 2020).

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



## CERTIFICATE OF ANALYSIS

**Work Order** : **VA20A1608**  
**Client** : **Covanta Burnaby Renewable Energy, ULC**  
**Contact** : Steve McKinney  
**Address** : 5150 Riverbend Drive  
Burnaby BC Canada V3N 4V3  
**Telephone** : 604 521 1025  
**Project** : ----  
**PO** : VANCO 0000049378  
**C-O-C number** : ----  
**Sampler** : ----  
**Site** : ----  
**Quote number** : Standing Offer  
**No. of samples received** : 12  
**No. of samples analysed** : 12

**Page** : 1 of 11  
**Laboratory** : Vancouver - Environmental  
**Account Manager** : Brent Mack  
**Address** : 8081 Lougheed Highway  
Burnaby BC Canada V5A 1W9  
**Telephone** : +1 604 253 4188  
**Date Samples Received** : 11-Feb-2020 12:00  
**Date Analysis Commenced** : 11-Feb-2020  
**Issue Date** : 18-Feb-2020 18:27

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.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Aaron Yu	Laboratory Analyst	Metals, Burnaby, British Columbia
Angela Ren	Team Leader - Metals	Metals, Burnaby, British Columbia
Evan Ben-Oliel	Metal Analyst	Metals, Burnaby, British Columbia
Janice Leung	Supervisor - Organics Extractions	Organics, Burnaby, British Columbia
Kim Jensen	Department Manager - Metals	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).

<i>Unit</i>	<i>Description</i>
%	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: Soil

Client sample ID

(Matrix: Soil)

					BA2006-A-1	BA2006-A-2	BA2006-A-3	BA2006-A-4	BA2006-A-5
Client sampling date / time					05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00
Analyte	CAS Number	Method	LOR	Unit	VA20A1608-001	VA20A1608-002	VA20A1608-003	VA20A1608-004	VA20A1608-005
					Result	Result	Result	Result	Result
<b>Physical Tests</b>									
moisture	----	E144	0.25	%	29.3	24.6	25.7	23.2	23.6
pH (1:2 soil:water)	----	E108	0.10	pH units	11.0	11.0	11.0	11.0	11.0
<b>Metals</b>									
aluminum	7429-90-5	E440	50	mg/kg	37800	43600	45100	40500	39100
antimony	7440-36-0	E440	0.10	mg/kg	219	142	138	121	145
arsenic	7440-38-2	E440	0.10	mg/kg	22.0	23.6	17.5	17.8	19.5
barium	7440-39-3	E440	0.50	mg/kg	680	706	583	697	643
beryllium	7440-41-7	E440	0.10	mg/kg	0.50	0.45	0.42	0.43	0.41
bismuth	7440-69-9	E440	0.20	mg/kg	12.9	17.8	15.6	18.3	14.0
boron	7440-42-8	E440	5.0	mg/kg	281	284	212	331	316
cadmium	7440-43-9	E440	0.020	mg/kg	13.2	13.3	12.0	10.9	11.9
calcium	7440-70-2	E440	50	mg/kg	148000	134000	140000	142000	137000
chromium	7440-47-3	E440	0.50	mg/kg	163	330	168	152	137
cobalt	7440-48-4	E440	0.10	mg/kg	472	107	29.4	56.7	31.0
copper	7440-50-8	E440	0.50	mg/kg	2530	1430	2070	9020	1870
iron	7439-89-6	E440	50	mg/kg	49100	56300	54300	52400	56700
lead	7439-92-1	E440	0.50	mg/kg	525	376	619	662	383
lithium	7439-93-2	E440	2.0	mg/kg	46.2	18.6	16.1	19.6	19.2
magnesium	7439-95-4	E440	20	mg/kg	12600	10800	13500	11500	13300
manganese	7439-96-5	E440	1.0	mg/kg	801	891	812	653	830
mercury	7439-97-6	E510	0.0500	mg/kg	0.112	0.380	0.155	0.255	0.0841
molybdenum	7439-98-7	E440	0.10	mg/kg	144	136	134	159	156
nickel	7440-02-0	E440	0.50	mg/kg	156	133	211	266	110
phosphorus	7723-14-0	E440	50	mg/kg	13100	11600	10800	12000	10500
potassium	7440-09-7	E440	100	mg/kg	6380	5720	4720	5680	5320
selenium	7782-49-2	E440	0.20	mg/kg	0.40	0.42	0.36	0.42	0.47
silver	7440-22-4	E440	0.10	mg/kg	10.2	6.67	14.1	4.12	3.79
sodium	7440-23-5	E440	50	mg/kg	17900	15400	13700	16100	14400
strontium	7440-24-6	E440	0.50	mg/kg	361	337	317	306	310
sulfur	7704-34-9	E440	1000	mg/kg	12100	11400	10600	10400	11200



## Analytical Results

Sub-Matrix: Soil					Client sample ID	BA2006-A-1	BA2006-A-2	BA2006-A-3	BA2006-A-4	BA2006-A-5
(Matrix: Soil)										
Client sampling date / time					05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	
Analyte	CAS Number	Method	LOR	Unit	VA20A1608-001	VA20A1608-002	VA20A1608-003	VA20A1608-004	VA20A1608-005	
					Result	Result	Result	Result	Result	
<b>Metals</b>										
thallium	7440-28-0	E440	0.050	mg/kg	0.080	0.083	0.075	0.078	0.088	
tin	7440-31-5	E440	2.0	mg/kg	152	142	137	190	131	
titanium	7440-32-6	E440	1.0	mg/kg	870	1560	1330	984	1200	
tungsten	7440-33-7	E440	0.50	mg/kg	9.77	7.05	8.43	6.70	7.06	
uranium	7440-61-1	E440	0.050	mg/kg	5.23	5.09	4.68	4.61	4.77	
vanadium	7440-62-2	E440	0.20	mg/kg	49.4	43.9	47.6	43.4	44.0	
zinc	7440-66-6	E440	2.0	mg/kg	4610	3810	3660	4990	6860	
zirconium	7440-67-7	E440	1.0	mg/kg	2.4	3.1	4.0	2.3	2.5	
<b>TCLP Metals</b>										
pH, TCLP 1st preliminary	----	EPP444	0.010	pH units	11.6	11.6	11.6	11.6	11.6	
pH, TCLP 2nd preliminary	----	EPP444	0.010	pH units	8.72	7.98	8.27	7.64	8.09	
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	6.27	5.98	6.23	6.30	6.26	
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	3.64	5.34	3.22	3.53	3.22	
cadmium, TCLP	7440-43-9	E444	0.050	mg/L	0.145	0.150	0.145	0.186	0.185	
calcium, TCLP	7440-70-2	E444	2.0	mg/L	1970	1820	1940	1980	1980	
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	0.515	0.795	0.471	0.458	1.16	
copper, TCLP	7440-50-8	E444	0.050	mg/L	0.699	0.504	1.22	0.803	0.633	
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	139	135	145	139	142	
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	0.40	0.44	0.40	0.41	0.71	
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: Soil (Matrix: Soil)					Client sample ID	BA2006-A-1	BA2006-A-2	BA2006-A-3	BA2006-A-4	BA2006-A-5
Client sampling date / time					05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00
Analyte	CAS Number	Method	LOR	Unit	VA20A1608-001	VA20A1608-002	VA20A1608-003	VA20A1608-004	VA20A1608-005	
					Result	Result	Result	Result	Result	
<b>TCLP Metals</b>										
vanadium, TCLP	7440-62-2	E444	0.15	mg/L	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
zinc, TCLP	7440-66-6	E444	0.50	mg/L	50.1	48.6	42.3	42.8	36.7	

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



## Analytical Results

Sub-Matrix: Soil					Client sample ID				
(Matrix: Soil)					BA2006-A-6	BA2006-A-7	BA2006-A-8	BA2006-A-9	BA2006-A-10
Client sampling date / time					05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00
Analyte	CAS Number	Method	LOR	Unit	VA20A1608-006	VA20A1608-007	VA20A1608-008	VA20A1608-009	VA20A1608-010
					Result	Result	Result	Result	Result
<b>Physical Tests</b>									
moisture	----	E144	0.25	%	25.9	30.3	24.6	26.8	25.4
pH (1:2 soil:water)	----	E108	0.10	pH units	11.0	11.0	10.9	11.0	11.0
<b>Metals</b>									
aluminum	7429-90-5	E440	50	mg/kg	32400	41900	35600	42200	31600
antimony	7440-36-0	E440	0.10	mg/kg	137	138	175	166	168
arsenic	7440-38-2	E440	0.10	mg/kg	18.6	21.3	19.9	21.8	23.1
barium	7440-39-3	E440	0.50	mg/kg	703	758	697	675	676
beryllium	7440-41-7	E440	0.10	mg/kg	0.36	0.47	0.42	0.40	0.44
bismuth	7440-69-9	E440	0.20	mg/kg	12.6	9.81	12.7	18.3	17.8
boron	7440-42-8	E440	5.0	mg/kg	297	205	232	273	297
cadmium	7440-43-9	E440	0.020	mg/kg	10.4	11.4	12.7	12.9	35.9
calcium	7440-70-2	E440	50	mg/kg	131000	142000	148000	152000	148000
chromium	7440-47-3	E440	0.50	mg/kg	141	148	139	165	146
cobalt	7440-48-4	E440	0.10	mg/kg	50.9	38.1	24.2	34.1	68.0
copper	7440-50-8	E440	0.50	mg/kg	3090	2280	1900	9730	6350
iron	7439-89-6	E440	50	mg/kg	72400	64700	37400	66500	61500
lead	7439-92-1	E440	0.50	mg/kg	781	420	589	462	2930
lithium	7439-93-2	E440	2.0	mg/kg	16.8	16.4	18.4	17.3	22.1
magnesium	7439-95-4	E440	20	mg/kg	13000	12100	12200	11500	11100
manganese	7439-96-5	E440	1.0	mg/kg	738	734	711	836	1380
mercury	7439-97-6	E510	0.0500	mg/kg	0.170	0.116	0.128	0.141	0.173
molybdenum	7439-98-7	E440	0.10	mg/kg	124	130	137	154	138
nickel	7440-02-0	E440	0.50	mg/kg	130	91.8	117	235	444
phosphorus	7723-14-0	E440	50	mg/kg	10400	11200	13000	12100	11300
potassium	7440-09-7	E440	100	mg/kg	4470	4700	5810	4870	4700
selenium	7782-49-2	E440	0.20	mg/kg	0.38	0.47	0.46	0.49	0.60
silver	7440-22-4	E440	0.10	mg/kg	4.51	4.73	4.72	8.57	6.12
sodium	7440-23-5	E440	50	mg/kg	15200	14700	16000	15200	14400
strontium	7440-24-6	E440	0.50	mg/kg	331	658	354	327	348
sulfur	7704-34-9	E440	1000	mg/kg	9900	9900	11900	12200	11800
thallium	7440-28-0	E440	0.050	mg/kg	0.075	0.074	0.089	0.094	0.089



## Analytical Results

Sub-Matrix: Soil					Client sample ID				
(Matrix: Soil)					BA2006-A-6	BA2006-A-7	BA2006-A-8	BA2006-A-9	BA2006-A-10
Client sampling date / time					05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00
Analyte	CAS Number	Method	LOR	Unit	VA20A1608-006	VA20A1608-007	VA20A1608-008	VA20A1608-009	VA20A1608-010
					Result	Result	Result	Result	Result
<b>Metals</b>									
tin	7440-31-5	E440	2.0	mg/kg	189	118	136	205	132
titanium	7440-32-6	E440	1.0	mg/kg	969	1740	773	894	872
tungsten	7440-33-7	E440	0.50	mg/kg	8.06	7.81	9.72	12.2	9.54
uranium	7440-61-1	E440	0.050	mg/kg	4.39	4.36	5.35	5.42	5.43
vanadium	7440-62-2	E440	0.20	mg/kg	49.1	42.4	46.0	47.6	57.9
zinc	7440-66-6	E440	2.0	mg/kg	6680	3140	3490	8530	4630
zirconium	7440-67-7	E440	1.0	mg/kg	2.0	3.5	2.4	2.5	1.7
<b>TCLP Metals</b>									
pH, TCLP 1st preliminary	----	EPP444	0.010	pH units	11.6	11.7	11.6	11.4	11.6
pH, TCLP 2nd preliminary	----	EPP444	0.010	pH units	6.46	8.66	8.94	8.42	8.68
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	6.20	6.11	6.14	6.25
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	3.12	3.40	5.76	3.42	3.22
cadmium, TCLP	7440-43-9	E444	0.050	mg/L	0.130	0.286	0.186	0.144	0.155
calcium, TCLP	7440-70-2	E444	2.0	mg/L	1930	1980	2140	1950	1950
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	0.338	1.66	0.617	0.675	0.567
copper, TCLP	7440-50-8	E444	0.050	mg/L	0.387	0.562	1.04	0.512	0.937
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	137	144	154	136	144
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	0.80	0.49	0.59	0.44	0.47
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: Soil (Matrix: Soil)					Client sample ID	BA2006-A-6	BA2006-A-7	BA2006-A-8	BA2006-A-9	BA2006-A-10
Client sampling date / time					05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00	05-Feb-2020 09:00
Analyte	CAS Number	Method	LOR	Unit	VA20A1608-006	VA20A1608-007	VA20A1608-008	VA20A1608-009	VA20A1608-010	
					Result	Result	Result	Result	Result	
<b>TCLP Metals</b>										
zinc, TCLP	7440-66-6	E444	0.50	mg/L	38.3	38.4	44.9	34.1	47.8	

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



## Analytical Results

Sub-Matrix: Soil					Client sample ID				
(Matrix: Soil)					BA2006-A-11	BA2006-A-12	----	----	----
Client sampling date / time					05-Feb-2020 09:00	05-Feb-2020 09:00	---	---	---
Analyte	CAS Number	Method	LOR	Unit	VA20A1608-011	VA20A1608-012	-----	-----	-----
					Result	Result	---	---	---
<b>Physical Tests</b>									
moisture	----	E144	0.25	%	24.4	25.9	----	----	----
pH (1:2 soil:water)	----	E108	0.10	pH units	10.9	11.0	----	----	----
<b>Metals</b>									
aluminum	7429-90-5	E440	50	mg/kg	44300	34600	----	----	----
antimony	7440-36-0	E440	0.10	mg/kg	130	137	----	----	----
arsenic	7440-38-2	E440	0.10	mg/kg	17.4	16.9	----	----	----
barium	7440-39-3	E440	0.50	mg/kg	620	623	----	----	----
beryllium	7440-41-7	E440	0.10	mg/kg	0.39	0.35	----	----	----
bismuth	7440-69-9	E440	0.20	mg/kg	10.0	16.0	----	----	----
boron	7440-42-8	E440	5.0	mg/kg	217	294	----	----	----
cadmium	7440-43-9	E440	0.020	mg/kg	10.4	11.0	----	----	----
calcium	7440-70-2	E440	50	mg/kg	133000	134000	----	----	----
chromium	7440-47-3	E440	0.50	mg/kg	129	161	----	----	----
cobalt	7440-48-4	E440	0.10	mg/kg	71.2	46.8	----	----	----
copper	7440-50-8	E440	0.50	mg/kg	3240	2000	----	----	----
iron	7439-89-6	E440	50	mg/kg	45400	64600	----	----	----
lead	7439-92-1	E440	0.50	mg/kg	1780	864	----	----	----
lithium	7439-93-2	E440	2.0	mg/kg	28.3	16.1	----	----	----
magnesium	7439-95-4	E440	20	mg/kg	12200	11000	----	----	----
manganese	7439-96-5	E440	1.0	mg/kg	934	723	----	----	----
mercury	7439-97-6	E510	0.0500	mg/kg	0.285	0.158	----	----	----
molybdenum	7439-98-7	E440	0.10	mg/kg	122	144	----	----	----
nickel	7440-02-0	E440	0.50	mg/kg	111	156	----	----	----
phosphorus	7723-14-0	E440	50	mg/kg	12500	11700	----	----	----
potassium	7440-09-7	E440	100	mg/kg	4560	4260	----	----	----
selenium	7782-49-2	E440	0.20	mg/kg	0.33	0.36	----	----	----
silver	7440-22-4	E440	0.10	mg/kg	4.51	20.2	----	----	----
sodium	7440-23-5	E440	50	mg/kg	14300	14400	----	----	----
strontium	7440-24-6	E440	0.50	mg/kg	328	316	----	----	----
sulfur	7704-34-9	E440	1000	mg/kg	9700	9300	----	----	----
thallium	7440-28-0	E440	0.050	mg/kg	0.101	0.087	----	----	----



## Analytical Results

Sub-Matrix: Soil					Client sample ID				
(Matrix: Soil)					BA2006-A-11	BA2006-A-12	----	----	----
Client sampling date / time					05-Feb-2020 09:00	05-Feb-2020 09:00	---	---	---
Analyte	CAS Number	Method	LOR	Unit	VA20A1608-011	VA20A1608-012	-----	-----	-----
					Result	Result	---	---	---
<b>Metals</b>									
tin	7440-31-5	E440	2.0	mg/kg	179	165	----	----	----
titanium	7440-32-6	E440	1.0	mg/kg	711	439	----	----	----
tungsten	7440-33-7	E440	0.50	mg/kg	4.90	6.52	----	----	----
uranium	7440-61-1	E440	0.050	mg/kg	4.54	5.95	----	----	----
vanadium	7440-62-2	E440	0.20	mg/kg	42.4	41.0	----	----	----
zinc	7440-66-6	E440	2.0	mg/kg	11200	5290	----	----	----
zirconium	7440-67-7	E440	1.0	mg/kg	3.9	2.1	----	----	----
<b>TCLP Metals</b>									
pH, TCLP 1st preliminary	----	EPP444	0.010	pH units	11.7	11.6	----	----	----
pH, TCLP 2nd preliminary	----	EPP444	0.010	pH units	7.99	8.39	----	----	----
pH, TCLP extraction fluid initial	----	EPP444	0.010	pH units	2.87	2.87	----	----	----
pH, TCLP final	----	EPP444	0.010	pH units	6.14	6.38	----	----	----
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	3.00	3.70	----	----	----
cadmium, TCLP	7440-43-9	E444	0.050	mg/L	0.360	0.170	----	----	----
calcium, TCLP	7440-70-2	E444	2.0	mg/L	1940	2070	----	----	----
chromium, TCLP	7440-47-3	E444	0.25	mg/L	<0.25	<0.25	----	----	----
cobalt, TCLP	7440-48-4	E444	0.050	mg/L	0.565	0.871	----	----	----
copper, TCLP	7440-50-8	E444	0.050	mg/L	0.548	0.950	----	----	----
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	<0.25	----	----	----
magnesium, TCLP	7439-95-4	E444	0.50	mg/L	138	144	----	----	----
mercury, TCLP	7439-97-6	E512	0.0100	mg/L	<0.0100	<0.0100	----	----	----
nickel, TCLP	7440-02-0	E444	0.25	mg/L	0.41	0.46	----	----	----
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: Soil					Client sample ID	BA2006-A-11	BA2006-A-12	----	----	----
(Matrix: Soil)					Client sampling date / time	05-Feb-2020 09:00	05-Feb-2020 09:00	---	---	---
Analyte	CAS Number	Method	LOR	Unit	VA20A1608-011	VA20A1608-012	-----	-----	-----	
TCLP Metals					Result	Result	---	---	---	
zinc, TCLP	7440-66-6	E444	0.50	mg/L	64.2	54.0	----	----	----	

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