Bottom Ash Data

2020 Week 9

The following analytical report was sent to the Ministry of Environment and Climate Change Strategy on March 10, 2020. The data represents bottom ash composite results for week 9 of 2020 (February 23, 2020 to February 29, 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	: **VA20A2663**	Page	: 1 of 11
Client	: **Covanta Burnaby Renewable Energy, 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	: 03-Mar-2020 11:40
PO	: VANCO 0000049378	Date Analysis Commenced	: 03-Mar-2020
C-O-C number	: ----	Issue Date	: 09-Mar-2020 10:54
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*
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
Kinny Wu	Laboratory Analyst	Metals, Burnaby, British Columbia
Robin Weeks	Team Leader - 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).

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: **Soil**
(Matrix: **Soil**)

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2009-A-1	BA2009-A-2	BA2009-A-3	BA2009-A-4	BA2009-A-5
					Client sampling date / time	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00
						VA20A2663-001	VA20A2663-002	VA20A2663-003	VA20A2663-004	VA20A2663-005
						Result	Result	Result	Result	Result
Physical Tests										
moisture	----	E144	0.25	%		24.5	24.0	24.7	23.2	24.6
pH (1:2 soil:water)	----	E108	0.10	pH units		10.6	10.7	10.5	10.6	10.6
Metals										
aluminum	7429-90-5	E440	50	mg/kg		40500	38600	31700	34400	35800
antimony	7440-36-0	E440	0.10	mg/kg		83.0	82.9	87.0	79.2	96.3
arsenic	7440-38-2	E440	0.10	mg/kg		14.9	17.9	14.0	29.2	16.0
barium	7440-39-3	E440	0.50	mg/kg		658	644	608	686	657
beryllium	7440-41-7	E440	0.10	mg/kg		0.38	0.38	0.37	0.39	0.34
bismuth	7440-69-9	E440	0.20	mg/kg		7.60	4.74	4.76	5.60	9.13
boron	7440-42-8	E440	5.0	mg/kg		233	339	278	219	226
cadmium	7440-43-9	E440	0.020	mg/kg		1080	6.95	8.66	11.3	7.28
calcium	7440-70-2	E440	50	mg/kg		116000	111000	108000	107000	109000
chromium	7440-47-3	E440	0.50	mg/kg		172	158	134	157	162
cobalt	7440-48-4	E440	0.10	mg/kg		23.2	24.1	27.6	35.2	26.2
copper	7440-50-8	E440	0.50	mg/kg		1360	2410	6100	2100	6220
iron	7439-89-6	E440	50	mg/kg		78400	53900	72400	90800	62200
lead	7439-92-1	E440	0.50	mg/kg		319	652	257	1950	378
lithium	7439-93-2	E440	2.0	mg/kg		21.6	18.2	17.1	17.1	16.0
magnesium	7439-95-4	E440	20	mg/kg		10300	10600	9920	10500	9710
manganese	7439-96-5	E440	1.0	mg/kg		900	755	732	1150	3800
mercury	7439-97-6	E510	0.0500	mg/kg		0.0710	0.0836	0.0872	0.152	0.100
molybdenum	7439-98-7	E440	0.10	mg/kg		108	85.6	60.4	38.1	51.2
nickel	7440-02-0	E440	0.50	mg/kg		84.6	253	124	125	186
phosphorus	7723-14-0	E440	50	mg/kg		10400	10700	10100	9000	11000
potassium	7440-09-7	E440	100	mg/kg		4350	4260	4450	4380	4130
selenium	7782-49-2	E440	0.20	mg/kg		0.37	0.38	0.40	0.30	0.43
silver	7440-22-4	E440	0.10	mg/kg		4.07	5.17	11.0	4.35	19.6
sodium	7440-23-5	E440	50	mg/kg		13700	13200	13800	13400	13100
strontium	7440-24-6	E440	0.50	mg/kg		427	321	290	285	293
sulfur	7704-34-9	E440	1000	mg/kg		10000	8900	10000	9600	9600

Analytical Results

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

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2009-A-1	BA2009-A-2	BA2009-A-3	BA2009-A-4	BA2009-A-5
					Client sampling date / time	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00
						VA20A2663-001	VA20A2663-002	VA20A2663-003	VA20A2663-004	VA20A2663-005
						Result	Result	Result	Result	Result
Metals										
thallium	7440-28-0	E440	0.050	mg/kg		0.059	0.066	0.061	0.059	0.058
tin	7440-31-5	E440	2.0	mg/kg		125	88.5	250	122	3770
titanium	7440-32-6	E440	1.0	mg/kg		496	633	624	699	756
tungsten	7440-33-7	E440	0.50	mg/kg		19.6	15.4	9.99	18.2	13.2
uranium	7440-61-1	E440	0.050	mg/kg		5.33	4.79	4.55	4.57	4.44
vanadium	7440-62-2	E440	0.20	mg/kg		54.4	37.2	40.1	41.8	41.5
zinc	7440-66-6	E440	2.0	mg/kg		3580	3260	3350	5760	6090
zirconium	7440-67-7	E440	1.0	mg/kg		1.8	1.5	1.1	1.4	1.5
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444	0.010	pH units		11.3	11.3	11.4	11.4	11.4
pH, TCLP 2nd preliminary	----	EPP444	0.010	pH units		8.13	6.29	8.31	7.60	8.15
pH, TCLP extraction fluid initial	----	EPP444	0.010	pH units		2.91	2.91	2.91	2.91	2.91
pH, TCLP final	----	EPP444	0.010	pH units		6.07	6.19	5.60	5.68	6.01
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		3.16	3.18	5.49	3.94	3.24
cadmium, TCLP	7440-43-9	E444	0.050	mg/L		0.142	0.111	0.129	0.146	0.326
calcium, TCLP	7440-70-2	E444	2.0	mg/L		1840	1820	1900	1990	1820
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		0.722	0.920	0.819	0.671	0.791
copper, TCLP	7440-50-8	E444	0.050	mg/L		0.908	0.852	1.06	1.13	0.920
iron, TCLP	7439-89-6	E444	5.0	mg/L		<5.0	<5.0	10.8	<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		131	131	135	142	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		0.34	0.42	0.61	0.42	0.40
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**)

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2009-A-1	BA2009-A-2	BA2009-A-3	BA2009-A-4	BA2009-A-5
					Client sampling date / time	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00
						VA20A2663-001	VA20A2663-002	VA20A2663-003	VA20A2663-004	VA20A2663-005
						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		30.2	26.1	53.1	49.4	42.2

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

Analytical Results

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

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2009-A-6	BA2009-A-7	BA2009-A-8	BA2009-A-9	BA2009-A-10
					Client sampling date / time	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00
						VA20A2663-006	VA20A2663-007	VA20A2663-008	VA20A2663-009	VA20A2663-010
						Result	Result	Result	Result	Result
Physical Tests										
moisture	----	E144	0.25	%		23.5	24.1	24.8	20.9	23.5
pH (1:2 soil:water)	----	E108	0.10	pH units		10.6	10.7	10.8	10.8	10.8
Metals										
aluminum	7429-90-5	E440	50	mg/kg		44200	30000	34400	34400	32700
antimony	7440-36-0	E440	0.10	mg/kg		90.3	91.2	85.8	84.2	78.8
arsenic	7440-38-2	E440	0.10	mg/kg		15.6	24.2	27.2	15.9	14.4
barium	7440-39-3	E440	0.50	mg/kg		595	536	516	611	620
beryllium	7440-41-7	E440	0.10	mg/kg		0.35	0.34	0.34	0.34	0.33
bismuth	7440-69-9	E440	0.20	mg/kg		6.69	8.48	5.55	6.34	14.4
boron	7440-42-8	E440	5.0	mg/kg		198	235	225	217	275
cadmium	7440-43-9	E440	0.020	mg/kg		8.51	6.96	7.02	9.47	7.15
calcium	7440-70-2	E440	50	mg/kg		103000	110000	102000	102000	102000
chromium	7440-47-3	E440	0.50	mg/kg		123	129	116	150	446
cobalt	7440-48-4	E440	0.10	mg/kg		28.6	187	27.7	56.6	30.4
copper	7440-50-8	E440	0.50	mg/kg		1140	1310	2210	5650	6350
iron	7439-89-6	E440	50	mg/kg		69800	63200	62000	58600	66800
lead	7439-92-1	E440	0.50	mg/kg		275	340	274	286	325
lithium	7439-93-2	E440	2.0	mg/kg		17.1	20.0	20.6	18.0	18.8
magnesium	7439-95-4	E440	20	mg/kg		9900	9860	10800	10200	11000
manganese	7439-96-5	E440	1.0	mg/kg		768	816	708	674	740
mercury	7439-97-6	E510	0.0500	mg/kg		0.110	0.0808	0.242	0.137	0.0590
molybdenum	7439-98-7	E440	0.10	mg/kg		41.7	46.6	49.9	66.8	52.0
nickel	7440-02-0	E440	0.50	mg/kg		112	125	200	88.6	257
phosphorus	7723-14-0	E440	50	mg/kg		10300	10500	9740	9300	9680
potassium	7440-09-7	E440	100	mg/kg		4750	4460	4640	4250	4220
selenium	7782-49-2	E440	0.20	mg/kg		0.36	0.27	0.32	0.30	0.48
silver	7440-22-4	E440.Ag	0.10	mg/kg		----	----	----	----	5.18
silver	7440-22-4	E440	0.10	mg/kg		9.78	8.71	6.05	4.41	----
sodium	7440-23-5	E440	50	mg/kg		14200	13200	13600	13600	12800
strontium	7440-24-6	E440	0.50	mg/kg		256	276	257	987	268
sulfur	7704-34-9	E440	1000	mg/kg		10400	9900	9400	9800	9200

Analytical Results

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

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2009-A-6	BA2009-A-7	BA2009-A-8	BA2009-A-9	BA2009-A-10
					Client sampling date / time	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00
						VA20A2663-006	VA20A2663-007	VA20A2663-008	VA20A2663-009	VA20A2663-010
						Result	Result	Result	Result	Result
Metals										
thallium	7440-28-0	E440	0.050	mg/kg		0.069	0.058	0.060	0.068	0.063
tin	7440-31-5	E440	2.0	mg/kg		94.2	87.6	102	98.8	3680
titanium	7440-32-6	E440	1.0	mg/kg		1520	707	557	971	456
tungsten	7440-33-7	E440	0.50	mg/kg		11.6	10.2	11.5	13.1	12.1
uranium	7440-61-1	E440	0.050	mg/kg		4.74	4.40	4.40	4.39	4.27
vanadium	7440-62-2	E440	0.20	mg/kg		42.1	42.0	38.6	41.9	41.9
zinc	7440-66-6	E440	2.0	mg/kg		5340	3750	3000	5890	3180
zirconium	7440-67-7	E440	1.0	mg/kg		5.2	2.0	1.6	1.9	1.4
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444	0.010	pH units		11.4	11.4	11.3	11.4	11.3
pH, TCLP 2nd preliminary	----	EPP444	0.010	pH units		7.91	7.69	7.75	8.62	8.05
pH, TCLP extraction fluid initial	----	EPP444	0.010	pH units		2.91	2.91	2.91	2.91	2.91
pH, TCLP final	----	EPP444	0.010	pH units		5.79	6.09	5.61	5.46	5.75
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		3.48	3.09	3.19	2.98	3.18
cadmium, TCLP	7440-43-9	E444	0.050	mg/L		0.112	0.119	0.206	0.215	0.131
calcium, TCLP	7440-70-2	E444	2.0	mg/L		1840	1740	1990	1880	1920
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		0.792	1.10	0.742	0.463	0.807
copper, TCLP	7440-50-8	E444	0.050	mg/L		0.657	0.884	1.62	2.34	1.21
iron, TCLP	7439-89-6	E444	5.0	mg/L		<5.0	<5.0	<5.0	8.0	<5.0
lead, TCLP	7439-92-1	E444	0.25	mg/L		<0.25	0.26	<0.25	0.76	<0.25
magnesium, TCLP	7439-95-4	E444	0.50	mg/L		138	129	148	131	140
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	0.50	0.68	0.67	0.51
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**)

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2009-A-6	BA2009-A-7	BA2009-A-8	BA2009-A-9	BA2009-A-10
					Client sampling date / time	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00	26-Feb-2020 09:00
						VA20A2663-006	VA20A2663-007	VA20A2663-008	VA20A2663-009	VA20A2663-010
						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		29.0	42.0	54.0	46.0	84.3

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

Analytical Results

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

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2009-A-11	BA2009-A-12	----	----	----
					Client sampling date / time	26-Feb-2020 09:00	26-Feb-2020 09:00	----	----	----
						VA20A2663-011	VA20A2663-012	--------	--------	--------
						Result	Result	----	----	----
Physical Tests										
moisture	----	E144	0.25	%		22.0	24.4	----	----	----
pH (1:2 soil:water)	----	E108	0.10	pH units		10.7	10.8	----	----	----
Metals										
aluminum	7429-90-5	E440	50	mg/kg		37700	36100	----	----	----
antimony	7440-36-0	E440	0.10	mg/kg		96.2	148	----	----	----
arsenic	7440-38-2	E440	0.10	mg/kg		15.9	23.0	----	----	----
barium	7440-39-3	E440	0.50	mg/kg		624	590	----	----	----
beryllium	7440-41-7	E440	0.10	mg/kg		0.35	0.34	----	----	----
bismuth	7440-69-9	E440	0.20	mg/kg		5.84	4.91	----	----	----
boron	7440-42-8	E440	5.0	mg/kg		255	276	----	----	----
cadmium	7440-43-9	E440	0.020	mg/kg		8.01	6.70	----	----	----
calcium	7440-70-2	E440	50	mg/kg		109000	106000	----	----	----
chromium	7440-47-3	E440	0.50	mg/kg		133	148	----	----	----
cobalt	7440-48-4	E440	0.10	mg/kg		221	43.1	----	----	----
copper	7440-50-8	E440	0.50	mg/kg		13000	5960	----	----	----
iron	7439-89-6	E440	50	mg/kg		69000	68800	----	----	----
lead	7439-92-1	E440	0.50	mg/kg		397	215	----	----	----
lithium	7439-93-2	E440	2.0	mg/kg		20.8	18.0	----	----	----
magnesium	7439-95-4	E440	20	mg/kg		11000	10000	----	----	----
manganese	7439-96-5	E440	1.0	mg/kg		814	711	----	----	----
mercury	7439-97-6	E510	0.0500	mg/kg		0.0820	0.0892	----	----	----
molybdenum	7439-98-7	E440	0.10	mg/kg		47.4	54.4	----	----	----
nickel	7440-02-0	E440	0.50	mg/kg		868	100	----	----	----
phosphorus	7723-14-0	E440	50	mg/kg		10900	9970	----	----	----
potassium	7440-09-7	E440	100	mg/kg		4600	4080	----	----	----
selenium	7782-49-2	E440	0.20	mg/kg		0.35	0.30	----	----	----
silver	7440-22-4	E440	0.10	mg/kg		6.09	4.98	----	----	----
sodium	7440-23-5	E440	50	mg/kg		13800	13200	----	----	----
strontium	7440-24-6	E440	0.50	mg/kg		411	269	----	----	----
sulfur	7704-34-9	E440	1000	mg/kg		9800	9400	----	----	----
thallium	7440-28-0	E440	0.050	mg/kg		0.064	<0.050	----	----	----

Analytical Results

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

Analyte	CAS Number	Method	LOR	Unit	Client sample ID	BA2009-A-11	BA2009-A-12	----	----	----
					Client sampling date / time	26-Feb-2020 09:00	26-Feb-2020 09:00	----	----	----
						VA20A2663-011	VA20A2663-012	--------	--------	--------
						Result	Result	----	----	----
Metals										
tin	7440-31-5	E440	2.0	mg/kg		432	578	----	----	----
titanium	7440-32-6	E440	1.0	mg/kg		684	826	----	----	----
tungsten	7440-33-7	E440	0.50	mg/kg		10.2	10.6	----	----	----
uranium	7440-61-1	E440	0.050	mg/kg		4.57	4.33	----	----	----
vanadium	7440-62-2	E440	0.20	mg/kg		44.9	44.6	----	----	----
zinc	7440-66-6	E440	2.0	mg/kg		7630	2450	----	----	----
zirconium	7440-67-7	E440	1.0	mg/kg		1.5	2.3	----	----	----
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444	0.010	pH units		11.3	11.3	----	----	----
pH, TCLP 2nd preliminary	----	EPP444	0.010	pH units		7.82	7.68	----	----	----
pH, TCLP extraction fluid initial	----	EPP444	0.010	pH units		2.91	2.91	----	----	----
pH, TCLP final	----	EPP444	0.010	pH units		5.97	6.21	----	----	----
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	3.32	----	----	----
cadmium, TCLP	7440-43-9	E444	0.050	mg/L		0.143	0.110	----	----	----
calcium, TCLP	7440-70-2	E444	2.0	mg/L		1820	1810	----	----	----
chromium, TCLP	7440-47-3	E444	0.25	mg/L		<0.25	<0.25	----	----	----
cobalt, TCLP	7440-48-4	E444	0.050	mg/L		0.621	0.791	----	----	----
copper, TCLP	7440-50-8	E444	0.050	mg/L		0.909	0.659	----	----	----
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	128	----	----	----
mercury, TCLP	7439-97-6	E512	0.0100	mg/L		<0.0100	<0.0100	----	----	----
nickel, TCLP	7440-02-0	E444	0.25	mg/L		0.40	0.40	----	----	----
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** (Matrix: **Soil**)					Client sample ID	**BA2009-A-11**	**BA2009-A-12**	**----**	**----**	**----**
					Client sampling date / time	26-Feb-2020 09:00	26-Feb-2020 09:00	----	----	----
Analyte	*CAS Number*	*Method*	*LOR*	*Unit*		**VA20A2663-011**	**VA20A2663-012**	**--------**	**--------**	**--------**
						Result	Result	----	----	----
TCLP Metals										
zinc, TCLP	7440-66-6	E444	0.50	mg/L		27.1	31.2	----	----	----

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