

Bottom Ash Data

2020 Week 26

The following analytical report was sent to the Ministry of Environment and Climate Change Strategy on July 9, 2020. The data represents bottom ash composite results for week 26 of 2020 (June 21, 2020 to June 27, 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 : **VA20A9572**
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 (BC work)
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 : 02-Jul-2020 12:00
Date Analysis Commenced : 04-Jul-2020
Issue Date : 09-Jul-2020 11:22

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>
Brieanna Allen	Department Manager - Organics	Organics, Burnaby, British Columbia
Dee Lee	Analyst	Metals, Burnaby, British Columbia
Kim Jensen	Department Manager - Metals	Metals, 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).

<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/Solid)

					BA2026-A-1	BA2026-A-2	BA2026-A-3	BA2026-A-4	BA2026-A-5
Client sampling date / time					24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00
Analyte	CAS Number	Method	LOR	Unit	VA20A9572-001	VA20A9572-002	VA20A9572-003	VA20A9572-004	VA20A9572-005
					Result	Result	Result	Result	Result
Physical Tests									
moisture	----	E144	0.25	%	15.8	17.6	19.4	16.8	17.7
pH (1:2 soil:water)	----	E108	0.10	pH units	10.6	10.7	10.7	10.7	10.7
Metals									
aluminum	7429-90-5	E440	50	mg/kg	47200	32600	34000	25500	30900
antimony	7440-36-0	E440	0.10	mg/kg	87.0	111	100	102	107
arsenic	7440-38-2	E440	0.10	mg/kg	23.3	28.7	27.3	29.6	26.4
barium	7440-39-3	E440	0.50	mg/kg	636	593	602	533	550
beryllium	7440-41-7	E440	0.10	mg/kg	0.41	0.42	0.39	0.38	0.39
bismuth	7440-69-9	E440	0.20	mg/kg	3.64	11.8	7.25	3.80	3.66
boron	7440-42-8	E440	5.0	mg/kg	206	186	236	183	226
cadmium	7440-43-9	E440	0.020	mg/kg	9.38	11.2	12.4	10.7	8.64
calcium	7440-70-2	E440	50	mg/kg	121000	129000	126000	125000	117000
chromium	7440-47-3	E440	0.50	mg/kg	126	147	216	230	136
cobalt	7440-48-4	E440	0.10	mg/kg	21.4	26.1	31.9	41.9	37.0
copper	7440-50-8	E440	0.50	mg/kg	1790	2010	3360	1590	41100
iron	7439-89-6	E440	50	mg/kg	60300	53800	53600	67800	51300
lead	7439-92-1	E440	0.50	mg/kg	343	717	462	521	650
lithium	7439-93-2	E440	2.0	mg/kg	21.1	17.7	16.6	17.1	17.1
magnesium	7439-95-4	E440	20	mg/kg	10600	11300	11500	10100	10000
manganese	7439-96-5	E440	1.0	mg/kg	998	782	713	758	946
mercury	7439-97-6	E510	0.0500	mg/kg	0.0563	<0.0500	<0.0500	<0.0500	<0.0500
molybdenum	7439-98-7	E440	0.10	mg/kg	44.0	46.3	47.3	40.5	31.4
nickel	7440-02-0	E440	0.50	mg/kg	124	135	133	167	136
phosphorus	7723-14-0	E440	50	mg/kg	9670	10400	11000	10600	10600
potassium	7440-09-7	E440	100	mg/kg	4520	4530	4440	4500	4370
selenium	7782-49-2	E440	0.20	mg/kg	0.26	0.34	0.37	0.30	0.35
silver	7440-22-4	E440	0.10	mg/kg	4.30	11.8	3.02	2.62	8.79
sodium	7440-23-5	E440	50	mg/kg	13400	12800	12700	13000	12400
strontium	7440-24-6	E440	0.50	mg/kg	294	311	310	300	275
sulfur	7704-34-9	E440	1000	mg/kg	9800	11400	10300	11000	9900



Analytical Results

Sub-Matrix: Soil					Client sample ID	BA2026-A-1	BA2026-A-2	BA2026-A-3	BA2026-A-4	BA2026-A-5
(Matrix: Soil/Solid)										
Client sampling date / time					24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00
Analyte	CAS Number	Method	LOR	Unit	VA20A9572-001	VA20A9572-002	VA20A9572-003	VA20A9572-004	VA20A9572-005	
					Result	Result	Result	Result	Result	
Metals										
thallium	7440-28-0	E440	0.050	mg/kg	<0.050	0.056	0.058	0.051	0.064	
tin	7440-31-5	E440	2.0	mg/kg	103	658	107	103	945	
titanium	7440-32-6	E440	1.0	mg/kg	1150	673	654	526	314	
tungsten	7440-33-7	E440	0.50	mg/kg	3.62	5.57	4.22	3.66	3.68	
uranium	7440-61-1	E440	0.050	mg/kg	5.07	6.01	5.59	5.64	4.67	
vanadium	7440-62-2	E440	0.20	mg/kg	52.1	53.8	55.6	51.0	50.9	
zinc	7440-66-6	E440	2.0	mg/kg	4270	4960	3250	3020	6360	
zirconium	7440-67-7	E440	1.0	mg/kg	2.0	1.3	1.5	1.4	2.0	
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444	0.010	pH units	11.3	11.4	11.4	11.4	11.4	
pH, TCLP 2nd preliminary	----	EPP444	0.010	pH units	7.82	7.29	7.16	8.51	8.19	
pH, TCLP extraction fluid initial	----	EPP444	0.010	pH units	2.90	2.90	2.90	2.90	2.90	
pH, TCLP final	----	EPP444	0.010	pH units	5.43	6.05	6.10	5.67	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	1.68	2.05	2.04	1.76	2.04	
cadmium, TCLP	7440-43-9	E444	0.050	mg/L	0.133	0.192	0.369	0.137	0.174	
calcium, TCLP	7440-70-2	E444	10	mg/L	1740	1920	1930	1740	2000	
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	0.778	0.346	0.431	0.893	1.21	
copper, TCLP	7440-50-8	E444	0.050	mg/L	0.852	0.912	0.904	1.05	0.890	
iron, TCLP	7439-89-6	E444	5.0	mg/L	10.5	<5.0	<5.0	6.3	<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	2.5	mg/L	105	112	117	108	121	
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	0.57	0.38	0.51	0.38	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/Solid)					Client sample ID	BA2026-A-1	BA2026-A-2	BA2026-A-3	BA2026-A-4	BA2026-A-5
Client sampling date / time					24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00
Analyte	CAS Number	Method	LOR	Unit	VA20A9572-001	VA20A9572-002	VA20A9572-003	VA20A9572-004	VA20A9572-005	
					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	<0.15
zinc, TCLP	7440-66-6	E444	0.50	mg/L	37.5	37.6	37.5	49.4	33.5	

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



Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2026-A-6	BA2026-A-7	BA2026-A-8	BA2026-A-9	BA2026-A-10
Client sampling date / time					24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	
Analyte	CAS Number	Method	LOR	Unit	VA20A9572-006	VA20A9572-007	VA20A9572-008	VA20A9572-009	VA20A9572-010	
					Result	Result	Result	Result	Result	
Physical Tests										
moisture	----	E144	0.25	%	18.2	18.3	15.8	17.2	17.3	
pH (1:2 soil:water)	----	E108	0.10	pH units	10.8	10.7	10.8	10.8	10.8	
Metals										
aluminum	7429-90-5	E440	50	mg/kg	28100	31000	30700	37200	32600	
antimony	7440-36-0	E440	0.10	mg/kg	95.4	98.4	114	102	144	
arsenic	7440-38-2	E440	0.10	mg/kg	32.2	27.8	27.9	38.1	35.4	
barium	7440-39-3	E440	0.50	mg/kg	472	525	529	559	577	
beryllium	7440-41-7	E440	0.10	mg/kg	0.41	0.38	0.40	0.40	0.40	
bismuth	7440-69-9	E440	0.20	mg/kg	4.34	3.29	21.5	4.18	4.61	
boron	7440-42-8	E440	5.0	mg/kg	201	178	214	172	174	
cadmium	7440-43-9	E440	0.020	mg/kg	10.7	9.66	10.6	9.93	13.5	
calcium	7440-70-2	E440	50	mg/kg	130000	126000	121000	119000	130000	
chromium	7440-47-3	E440	0.50	mg/kg	156	144	207	183	387	
cobalt	7440-48-4	E440	0.10	mg/kg	28.4	88.0	48.1	40.3	56.1	
copper	7440-50-8	E440	0.50	mg/kg	1370	4440	2060	12600	2970	
iron	7439-89-6	E440	50	mg/kg	46600	55000	60500	55500	58500	
lead	7439-92-1	E440	0.50	mg/kg	848	2190	726	2300	1090	
lithium	7439-93-2	E440	2.0	mg/kg	17.5	18.2	16.1	17.4	18.2	
magnesium	7439-95-4	E440	20	mg/kg	10100	10900	10000	10400	10300	
manganese	7439-96-5	E440	1.0	mg/kg	755	757	724	1120	807	
mercury	7439-97-6	E510	0.0500	mg/kg	0.0842	<0.0500	<0.0500	<0.0500	<0.0500	
molybdenum	7439-98-7	E440	0.10	mg/kg	39.3	39.1	42.1	42.4	41.1	
nickel	7440-02-0	E440	0.50	mg/kg	150	172	165	138	126	
phosphorus	7723-14-0	E440	50	mg/kg	10100	9720	9180	9910	10000	
potassium	7440-09-7	E440	100	mg/kg	4320	4420	4710	4260	4630	
selenium	7782-49-2	E440	0.20	mg/kg	0.28	0.31	0.25	0.28	0.35	
silver	7440-22-4	E440	0.10	mg/kg	3.14	5.08	3.42	4.56	12.5	
sodium	7440-23-5	E440	50	mg/kg	12500	13000	12600	12900	12900	
strontium	7440-24-6	E440	0.50	mg/kg	316	298	294	289	310	
sulfur	7704-34-9	E440	1000	mg/kg	11600	10200	10200	11200	11700	
thallium	7440-28-0	E440	0.050	mg/kg	0.054	0.050	<0.050	0.052	0.055	



Analytical Results

Sub-Matrix: Soil					Client sample ID				
(Matrix: Soil/Solid)					BA2026-A-6	BA2026-A-7	BA2026-A-8	BA2026-A-9	BA2026-A-10
Client sampling date / time					24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00
Analyte	CAS Number	Method	LOR	Unit	VA20A9572-006	VA20A9572-007	VA20A9572-008	VA20A9572-009	VA20A9572-010
					Result	Result	Result	Result	Result
Metals									
tin	7440-31-5	E440	2.0	mg/kg	86.2	844	140	109	156
titanium	7440-32-6	E440	1.0	mg/kg	256	269	383	497	669
tungsten	7440-33-7	E440	0.50	mg/kg	4.57	3.88	4.10	4.65	7.82
uranium	7440-61-1	E440	0.050	mg/kg	6.00	5.06	5.10	6.07	5.50
vanadium	7440-62-2	E440	0.20	mg/kg	52.2	48.4	50.8	53.0	56.9
zinc	7440-66-6	E440	2.0	mg/kg	6040	4480	3520	3280	4180
zirconium	7440-67-7	E440	1.0	mg/kg	2.2	2.2	1.6	1.8	1.3
TCLP Metals									
pH, TCLP 1st preliminary	----	EPP444	0.010	pH units	11.4	11.4	11.5	11.5	11.5
pH, TCLP 2nd preliminary	----	EPP444	0.010	pH units	8.75	7.94	8.89	9.36	6.89
pH, TCLP extraction fluid initial	----	EPP444	0.010	pH units	2.90	2.90	2.90	2.90	2.90
pH, TCLP final	----	EPP444	0.010	pH units	6.05	6.09	5.66	5.91	5.99
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	1.91	1.96	1.92	1.96	1.90
cadmium, TCLP	7440-43-9	E444	0.050	mg/L	0.136	0.150	0.144	0.206	0.169
calcium, TCLP	7440-70-2	E444	10	mg/L	1870	1840	1720	1880	1900
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	0.836	0.522	0.323	0.380	0.446
copper, TCLP	7440-50-8	E444	0.050	mg/L	0.930	0.594	0.972	1.57	1.61
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	2.5	mg/L	117	117	105	128	116
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	0.52	0.42	0.63	0.43	0.42
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/Solid)					Client sample ID	BA2026-A-6	BA2026-A-7	BA2026-A-8	BA2026-A-9	BA2026-A-10
Client sampling date / time					24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00	24-Jun-2020 09:00
Analyte	CAS Number	Method	LOR	Unit	VA20A9572-006	VA20A9572-007	VA20A9572-008	VA20A9572-009	VA20A9572-010	
TCLP Metals					Result	Result	Result	Result	Result	
zinc, TCLP	7440-66-6	E444	0.50	mg/L	37.1	57.9	38.3	45.6	33.3	

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



Analytical Results

Sub-Matrix: Soil					Client sample ID	BA2026-A-11	BA2026-A-12	----	----	----
(Matrix: Soil/Solid)										
Client sampling date / time					24-Jun-2020 09:00	24-Jun-2020 09:00	---	---	---	
Analyte	CAS Number	Method	LOR	Unit	VA20A9572-011	VA20A9572-012	-----	-----	-----	
					Result	Result	---	---	---	
Physical Tests										
moisture	----	E144	0.25	%	18.2	19.9	----	----	----	
pH (1:2 soil:water)	----	E108	0.10	pH units	10.7	10.7	----	----	----	
Metals										
aluminum	7429-90-5	E440	50	mg/kg	31300	31100	----	----	----	
antimony	7440-36-0	E440	0.10	mg/kg	109	109	----	----	----	
arsenic	7440-38-2	E440	0.10	mg/kg	27.3	27.3	----	----	----	
barium	7440-39-3	E440	0.50	mg/kg	517	620	----	----	----	
beryllium	7440-41-7	E440	0.10	mg/kg	0.37	0.38	----	----	----	
bismuth	7440-69-9	E440	0.20	mg/kg	3.58	4.28	----	----	----	
boron	7440-42-8	E440	5.0	mg/kg	185	210	----	----	----	
cadmium	7440-43-9	E440	0.020	mg/kg	9.69	10.5	----	----	----	
calcium	7440-70-2	E440	50	mg/kg	121000	122000	----	----	----	
chromium	7440-47-3	E440	0.50	mg/kg	196	172	----	----	----	
cobalt	7440-48-4	E440	0.10	mg/kg	66.0	44.9	----	----	----	
copper	7440-50-8	E440	0.50	mg/kg	7810	3310	----	----	----	
iron	7439-89-6	E440	50	mg/kg	55800	66600	----	----	----	
lead	7439-92-1	E440	0.50	mg/kg	657	1850	----	----	----	
lithium	7439-93-2	E440	2.0	mg/kg	15.4	16.7	----	----	----	
magnesium	7439-95-4	E440	20	mg/kg	9530	10100	----	----	----	
manganese	7439-96-5	E440	1.0	mg/kg	717	782	----	----	----	
mercury	7439-97-6	E510	0.0500	mg/kg	<0.0500	<0.0500	----	----	----	
molybdenum	7439-98-7	E440	0.10	mg/kg	35.7	37.0	----	----	----	
nickel	7440-02-0	E440	0.50	mg/kg	144	225	----	----	----	
phosphorus	7723-14-0	E440	50	mg/kg	9360	9830	----	----	----	
potassium	7440-09-7	E440	100	mg/kg	3870	4160	----	----	----	
selenium	7782-49-2	E440	0.20	mg/kg	0.28	0.27	----	----	----	
silver	7440-22-4	E440.Ag	0.10	mg/kg	----	6.22	----	----	----	
silver	7440-22-4	E440	0.10	mg/kg	3.00	----	----	----	----	
sodium	7440-23-5	E440	50	mg/kg	11300	12100	----	----	----	
strontium	7440-24-6	E440	0.50	mg/kg	268	302	----	----	----	
sulfur	7704-34-9	E440	1000	mg/kg	10400	10500	----	----	----	



Analytical Results

Sub-Matrix: Soil					Client sample ID	BA2026-A-11	BA2026-A-12	----	----	----
(Matrix: Soil/Solid)										
Client sampling date / time						24-Jun-2020 09:00	24-Jun-2020 09:00	---	---	---
Analyte	CAS Number	Method	LOR	Unit	VA20A9572-011	VA20A9572-012	-----	-----	-----	-----
					Result	Result	---	---	---	---
Metals										
thallium	7440-28-0	E440	0.050	mg/kg	<0.050	<0.050	----	----	----	----
tin	7440-31-5	E440	2.0	mg/kg	95.5	886	----	----	----	----
titanium	7440-32-6	E440	1.0	mg/kg	468	622	----	----	----	----
tungsten	7440-33-7	E440	0.50	mg/kg	4.32	10.1	----	----	----	----
uranium	7440-61-1	E440	0.050	mg/kg	5.09	5.14	----	----	----	----
vanadium	7440-62-2	E440	0.20	mg/kg	60.0	52.4	----	----	----	----
zinc	7440-66-6	E440	2.0	mg/kg	3140	6240	----	----	----	----
zirconium	7440-67-7	E440	1.0	mg/kg	1.6	1.3	----	----	----	----
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444	0.010	pH units	11.4	11.4	----	----	----	----
pH, TCLP 2nd preliminary	----	EPP444	0.010	pH units	8.04	6.21	----	----	----	----
pH, TCLP extraction fluid initial	----	EPP444	0.010	pH units	2.90	2.90	----	----	----	----
pH, TCLP final	----	EPP444	0.010	pH units	5.70	6.16	----	----	----	----
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	1.98	2.27	----	----	----	----
cadmium, TCLP	7440-43-9	E444	0.050	mg/L	0.226	0.145	----	----	----	----
calcium, TCLP	7440-70-2	E444	10	mg/L	1800	2050	----	----	----	----
chromium, TCLP	7440-47-3	E444	0.25	mg/L	<0.25	<0.25	----	----	----	----
cobalt, TCLP	7440-48-4	E444	0.050	mg/L	0.932	0.450	----	----	----	----
copper, TCLP	7440-50-8	E444	0.050	mg/L	1.27	0.880	----	----	----	----
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	2.5	mg/L	111	122	----	----	----	----
mercury, TCLP	7439-97-6	E512	0.0100	mg/L	<0.0100	<0.0100	----	----	----	----
nickel, TCLP	7440-02-0	E444	0.25	mg/L	0.45	0.35	----	----	----	----
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	----	----	----	----



Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA2026-A-11	BA2026-A-12	----	----	----
Client sampling date / time					24-Jun-2020 09:00	24-Jun-2020 09:00	---	---	---	
Analyte	CAS Number	Method	LOR	Unit	VA20A9572-011	VA20A9572-012	-----	-----	-----	
TCLP Metals					Result	Result	---	---	---	
vanadium, TCLP	7440-62-2	E444	0.15	mg/L	<0.15	<0.15	----	----	----	
zinc, TCLP	7440-66-6	E444	0.50	mg/L	42.9	26.7	----	----	----	

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