

Bottom Ash Data

2025 Week 11

The following analytical report represents bottom ash composite results for week 11 of 2025 (March 9, 2025 to March 15, 2025).

The bottom ash meets the conditions of Metro Vancouver's 2020 Bottom Ash Management Plan and is suitable for disposal.

CERTIFICATE OF ANALYSIS

Work Order	: VA25A6050		
Client	: Veolia Environmental Services Canada	Laboratory	: ALS Environmental - Vancouver
Contact	: Brian Graham	Account Manager	: Gulraj Dhanaua
Address	: 5150 Riverbend Dr. Burnaby British Columbia Canada V3N 4V3	Address	: 8081 Lougheed Highway Burnaby BC Canada V5A 1W9
Telephone	: ----	Telephone	: +1 604 253 4188
Project	: Weekly Bottom Ash	Date Samples Received	: 19-Mar-2025 12:10
PO	: ----	Date Analysis Commenced	: 21-Mar-2025
C-O-C number	: ----	Issue Date	: 25-Mar-2025 12:47
Sampler	: ----		
Site	: Metro Van Ash Sampling Program		
Quote number	: VA25-VIS100-001		
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.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Janice Leung	Supervisor - Organics Instrumentation	Organics, Burnaby, British Columbia
Kevin Duarte	Supervisor - Metals ICP Instrumentation	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.

Workorder Comments

The TCLP matrix spike recovery was low (22.7%) for barium. The TCLP extract for the sample (BA 2511-A-1) used for the matrix spike is high in sulfur (302.57 mg/L), and likely contains high sulfate, which would be expected to precipitate the barium as barium sulfate, resulting in a low matrix spike recovery.



Analytical Results

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

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA 2511-A-1	BA 2511-A-2	BA 2511-A-3	BA 2511-A-4	BA 2511-A-5
Client sampling date / time					12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A6050-001	VA25A6050-002	VA25A6050-003	VA25A6050-004	VA25A6050-005	
					Result	Result	Result	Result	Result	
Physical Tests										
Moisture	----	E144/VA	0.25	%	25.1	23.4	23.7	25.3	25.3	
pH (1:2 soil:water)	----	E108/VA	0.10	pH units	11.00	10.75	10.99	11.04	10.87	
Metals										
Aluminum	7429-90-5	E440/VA	50	mg/kg	38300	38300	39000	54500	42800	
Antimony	7440-36-0	E440/VA	0.10	mg/kg	144	108	113	124	111	
Arsenic	7440-38-2	E440/VA	0.10	mg/kg	13.4	17.1	16.0	14.9	15.0	
Barium	7440-39-3	E440/VA	0.50	mg/kg	633	592	603	516	611	
Beryllium	7440-41-7	E440/VA	0.10	mg/kg	0.43	0.40	0.38	0.40	0.40	
Bismuth	7440-69-9	E440/VA	0.20	mg/kg	9.57	8.78	7.83	8.49	8.50	
Boron	7440-42-8	E440/VA	5.0	mg/kg	192	222	203	252	216	
Cadmium	7440-43-9	E440/VA	0.020	mg/kg	8.41	403	6.39	5.22	9.25	
Calcium	7440-70-2	E440/VA	50	mg/kg	130000	144000	139000	140000	137000	
Chromium	7440-47-3	E440/VA	0.50	mg/kg	144	410	213	144	155	
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	53.8	50.8	105	502	55.9	
Copper	7440-50-8	E440/VA	0.50	mg/kg	2870	3130	1890	1220	6040	
Iron	7439-89-6	E440/VA	50	mg/kg	74100	64000	55200	48100	47000	
Lead	7439-92-1	E440/VA	0.50	mg/kg	1620	430	369	1190	353	
Lithium	7439-93-2	E440/VA	2.0	mg/kg	34.2	32.3	31.4	47.0	31.3	
Magnesium	7439-95-4	E440/VA	20	mg/kg	12300	13300	13600	13200	12000	
Manganese	7439-96-5	E440/VA	1.0	mg/kg	724	860	752	830	814	
Mercury	7439-97-6	E510/VA	0.0500	mg/kg	0.0945	<0.0500	<0.0500	<0.0500	<0.0500	



Analytical Results

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

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA 2511-A-1	BA 2511-A-2	BA 2511-A-3	BA 2511-A-4	BA 2511-A-5
Client sampling date / time					12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A6050-001	VA25A6050-002	VA25A6050-003	VA25A6050-004	VA25A6050-005	
					Result	Result	Result	Result	Result	
Metals										
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg	20.0	63.2	29.8	27.6	26.4	
Nickel	7440-02-0	E440/VA	0.50	mg/kg	162	817	178	143	208	
Phosphorus	7723-14-0	E440/VA	50	mg/kg	8100	8710	10900	9720	10700	
Potassium	7440-09-7	E440/VA	100	mg/kg	5380	5580	5790	5980	5630	
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.31	0.34	0.36	0.34	0.28	
Silver	7440-22-4	E440/VA	0.10	mg/kg	5.16	19.3	7.22	4.89	4.07	
Sodium	7440-23-5	E440/VA	50	mg/kg	17500	18200	18600	18100	17700	
Strontium	7440-24-6	E440/VA	0.50	mg/kg	272	287	298	297	320	
Sulfur	7704-34-9	E440/VA	1000	mg/kg	11800	13900	15000	14400	10500	
Thallium	7440-28-0	E440/VA	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	
Tin	7440-31-5	E440/VA	2.0	mg/kg	125	123	113	114	103	
Titanium	7440-32-6	E440/VA	1.0	mg/kg	475	421	390	494	447	
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	6.59	26.3	8.23	8.14	7.86	
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.38	1.55	1.56	1.63	1.48	
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	35.6	38.3	41.0	39.6	36.6	
Zinc	7440-66-6	E440/VA	2.0	mg/kg	3150	4300	2730	3600	4810	
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	1.8	2.2	2.4	4.3	3.0	
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units	11.80	11.65	11.71	11.77	11.75	
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	5.34	5.42	5.15	5.72	5.86	
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	2.89	2.89	2.89	2.89	2.89	



Analytical Results

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

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA 2511-A-1	BA 2511-A-2	BA 2511-A-3	BA 2511-A-4	BA 2511-A-5
Client sampling date / time					12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A6050-001	VA25A6050-002	VA25A6050-003	VA25A6050-004	VA25A6050-005	
					Result	Result	Result	Result	Result	
TCLP Metals										
pH, TCLP final	----	EPP444/VA	0.010	pH units	6.86	6.79	6.83	6.74	6.47	
Antimony, TCLP	7440-36-0	E444/VA	1.00	mg/L	<1.00	<1.00	<1.00	<1.00	<1.00	
Arsenic, TCLP	7440-38-2	E444/VA	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Barium, TCLP	7440-39-3	E444/VA	2.5	mg/L	<2.5	<2.5	<2.5	<2.5	<2.5	
Beryllium, TCLP	7440-41-7	E444/VA	0.025	mg/L	<0.025	<0.025	<0.025	<0.025	<0.025	
Boron, TCLP	7440-42-8	E444/VA	0.50	mg/L	2.10	2.16	2.14	2.24	2.37	
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L	0.057	0.055	<0.050	0.064	0.097	
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L	1940	1930	1910	2000	2090	
Chromium, TCLP	7440-47-3	E444/VA	0.25	mg/L	<0.25	<0.25	<0.25	<0.25	<0.25	
Cobalt, TCLP	7440-48-4	E444/VA	0.050	mg/L	1.65	0.907	0.862	0.904	1.45	
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L	0.712	0.821	0.744	0.788	0.975	
Iron, TCLP	7439-89-6	E444/VA	5.0	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	
Lead, TCLP	7439-92-1	E444/VA	0.25	mg/L	<0.25	<0.25	<0.25	<0.25	0.36	
Magnesium, TCLP	7439-95-4	E444/VA	2.5	mg/L	138	136	129	144	156	
Mercury, TCLP	7439-97-6	E512/VA	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
Nickel, TCLP	7440-02-0	E444/VA	0.25	mg/L	0.34	0.40	0.30	0.41	0.40	
Selenium, TCLP	7782-49-2	E444/VA	0.10	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	
Silver, TCLP	7440-22-4	E444/VA	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	
Thallium, TCLP	7440-28-0	E444/VA	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	
Uranium, TCLP	7440-61-1	E444/VA	0.20	mg/L	<0.20	<0.20	<0.20	<0.20	<0.20	
Vanadium, TCLP	7440-62-2	E444/VA	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	BA 2511-A-1	BA 2511-A-2	BA 2511-A-3	BA 2511-A-4	BA 2511-A-5
Client sampling date / time						12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A6050-001	VA25A6050-002	VA25A6050-003	VA25A6050-004	VA25A6050-005
						Result	Result	Result	Result	Result
TCLP Metals										
Zinc, TCLP	7440-66-6	E444/VA	0.50	mg/L		7.91	10.6	19.3	14.1	31.3
Zirconium, TCLP	7440-67-7	E444/VA	10	mg/L		<10	<10	<10	<10	<10

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

Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA 2511-A-6	BA 2511-A-7	BA 2511-A-8	BA 2511-A-9	BA 2511-A-10
Client sampling date / time						12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A6050-006	VA25A6050-007	VA25A6050-008	VA25A6050-009	VA25A6050-010
						Result	Result	Result	Result	Result
Physical Tests										
Moisture	----	E144/VA	0.25	%		24.8	25.0	23.8	24.1	24.4
pH (1:2 soil:water)	----	E108/VA	0.10	pH units		10.88	11.34	10.86	11.00	10.97
Metals										
Aluminum	7429-90-5	E440/VA	50	mg/kg		41700	33500	41800	34400	33300
Antimony	7440-36-0	E440/VA	0.10	mg/kg		99.3	82.2	86.1	98.5	98.0
Arsenic	7440-38-2	E440/VA	0.10	mg/kg		13.5	13.7	15.3	20.9	15.9
Barium	7440-39-3	E440/VA	0.50	mg/kg		562	558	637	575	552
Beryllium	7440-41-7	E440/VA	0.10	mg/kg		0.38	0.46	0.40	0.51	0.39
Bismuth	7440-69-9	E440/VA	0.20	mg/kg		16.1	8.47	8.07	9.95	9.23
Boron	7440-42-8	E440/VA	5.0	mg/kg		279	206	184	208	198
Cadmium	7440-43-9	E440/VA	0.020	mg/kg		6.08	5.56	5.91	6.56	6.24
Calcium	7440-70-2	E440/VA	50	mg/kg		134000	137000	134000	139000	139000



Analytical Results

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

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA 2511-A-6	BA 2511-A-7	BA 2511-A-8	BA 2511-A-9	BA 2511-A-10
Client sampling date / time					12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A6050-006	VA25A6050-007	VA25A6050-008	VA25A6050-009	VA25A6050-010	
					Result	Result	Result	Result	Result	
Metals										
Chromium	7440-47-3	E440/VA	0.50	mg/kg	141	259	204	164	334	
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	107	176	82.3	151	168	
Copper	7440-50-8	E440/VA	0.50	mg/kg	14100	5980	4830	1880	1340	
Iron	7439-89-6	E440/VA	50	mg/kg	57600	56100	60600	54400	68200	
Lead	7439-92-1	E440/VA	0.50	mg/kg	401	324	518	345	1560	
Lithium	7439-93-2	E440/VA	2.0	mg/kg	37.4	40.1	32.0	32.7	37.2	
Magnesium	7439-95-4	E440/VA	20	mg/kg	11600	13300	13800	13400	12800	
Manganese	7439-96-5	E440/VA	1.0	mg/kg	783	895	813	846	1240	
Mercury	7439-97-6	E510/VA	0.0500	mg/kg	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg	27.0	27.1	26.9	27.6	27.6	
Nickel	7440-02-0	E440/VA	0.50	mg/kg	709	218	177	181	176	
Phosphorus	7723-14-0	E440/VA	50	mg/kg	9660	8640	9030	10300	10600	
Potassium	7440-09-7	E440/VA	100	mg/kg	5330	5170	6100	5460	5580	
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.35	0.32	0.25	0.36	0.34	
Silver	7440-22-4	E440/VA	0.10	mg/kg	10.5	3.58	5.20	3.69	4.12	
Sodium	7440-23-5	E440/VA	50	mg/kg	17300	16400	18800	17000	16900	
Strontium	7440-24-6	E440/VA	0.50	mg/kg	280	329	288	287	295	
Sulfur	7704-34-9	E440/VA	1000	mg/kg	11800	10700	12700	12500	12800	
Thallium	7440-28-0	E440/VA	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	
Tin	7440-31-5	E440/VA	2.0	mg/kg	168	102	119	106	100	
Titanium	7440-32-6	E440/VA	1.0	mg/kg	417	235	306	242	243	



Analytical Results

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

					Client sample ID	BA 2511-A-6	BA 2511-A-7	BA 2511-A-8	BA 2511-A-9	BA 2511-A-10
					Client sampling date / time	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A6050-006	VA25A6050-007	VA25A6050-008	VA25A6050-009	VA25A6050-010
						Result	Result	Result	Result	Result
Metals										
Tungsten	7440-33-7	E440/VA	0.50	mg/kg		8.17	7.60	5.46	7.26	7.36
Uranium	7440-61-1	E440/VA	0.050	mg/kg		1.51	1.65	1.47	1.44	1.52
Vanadium	7440-62-2	E440/VA	0.20	mg/kg		35.7	39.6	36.7	39.2	43.7
Zinc	7440-66-6	E440/VA	2.0	mg/kg		5450	4090	4700	3670	3520
Zirconium	7440-67-7	E440/VA	1.0	mg/kg		2.9	3.3	3.9	2.8	3.2
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units		11.68	11.79	11.74	11.70	11.72
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units		5.58	5.87	5.47	5.70	5.55
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units		2.89	2.89	2.89	2.89	2.89
pH, TCLP final	----	EPP444/VA	0.010	pH units		6.55	6.67	6.53	6.58	6.55
Antimony, TCLP	7440-36-0	E444/VA	1.00	mg/L		<1.00	<1.00	<1.00	<1.00	<1.00
Arsenic, TCLP	7440-38-2	E444/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Barium, TCLP	7440-39-3	E444/VA	2.5	mg/L		<2.5	<2.5	<2.5	<2.5	<2.5
Beryllium, TCLP	7440-41-7	E444/VA	0.025	mg/L		<0.025	<0.025	<0.025	<0.025	<0.025
Boron, TCLP	7440-42-8	E444/VA	0.50	mg/L		2.33	2.41	2.55	2.34	2.34
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L		0.130	0.792	0.087	0.099	0.072
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L		2120	2100	2180	2120	2050
Chromium, TCLP	7440-47-3	E444/VA	0.25	mg/L		<0.25	<0.25	<0.25	<0.25	<0.25
Cobalt, TCLP	7440-48-4	E444/VA	0.050	mg/L		1.12	1.18	0.958	1.17	1.50
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L		0.959	0.838	0.984	1.04	0.786
Iron, TCLP	7439-89-6	E444/VA	5.0	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0



Analytical Results

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

					Client sample ID	BA 2511-A-6	BA 2511-A-7	BA 2511-A-8	BA 2511-A-9	BA 2511-A-10
					Client sampling date / time	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00	12-Mar-2025 09:00
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A6050-006	VA25A6050-007	VA25A6050-008	VA25A6050-009	VA25A6050-010
						Result	Result	Result	Result	Result
TCLP Metals										
Lead, TCLP	7439-92-1	E444/VA	0.25	mg/L		<0.25	<0.25	<0.25	<0.25	<0.25
Magnesium, TCLP	7439-95-4	E444/VA	2.5	mg/L		151	153	150	149	154
Mercury, TCLP	7439-97-6	E512/VA	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel, TCLP	7440-02-0	E444/VA	0.25	mg/L		0.46	0.36	0.51	0.45	0.60
Selenium, TCLP	7782-49-2	E444/VA	0.10	mg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Silver, TCLP	7440-22-4	E444/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Thallium, TCLP	7440-28-0	E444/VA	1.0	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Uranium, TCLP	7440-61-1	E444/VA	0.20	mg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Vanadium, TCLP	7440-62-2	E444/VA	0.15	mg/L		<0.15	<0.15	<0.15	<0.15	<0.15
Zinc, TCLP	7440-66-6	E444/VA	0.50	mg/L		16.8	14.9	24.5	22.4	20.3
Zirconium, TCLP	7440-67-7	E444/VA	10	mg/L		<10	<10	<10	<10	<10

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

Analytical Results

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

					Client sample ID	BA 2511-A-11	BA 2511-A-12	----	----	----
					Client sampling date / time	12-Mar-2025 09:00	12-Mar-2025 09:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A6050-011	VA25A6050-012	----	----	----
						Result	Result	----	----	----
Physical Tests										
Moisture	----	E144/VA	0.25	%		23.7	24.2	----	----	----
pH (1:2 soil:water)	----	E108/VA	0.10	pH units		11.08	10.98	----	----	----



Analytical Results

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

					Client sample ID	BA 2511-A-11	BA 2511-A-12	----	----	----
					Client sampling date / time	12-Mar-2025 09:00	12-Mar-2025 09:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A6050-011	VA25A6050-012	----	----	----	----
					Result	Result	----	----	----	----
Metals										
Aluminum	7429-90-5	E440/VA	50	mg/kg	34200	34200	----	----	----	----
Antimony	7440-36-0	E440/VA	0.10	mg/kg	89.5	117	----	----	----	----
Arsenic	7440-38-2	E440/VA	0.10	mg/kg	15.0	16.9	----	----	----	----
Barium	7440-39-3	E440/VA	0.50	mg/kg	625	473	----	----	----	----
Beryllium	7440-41-7	E440/VA	0.10	mg/kg	0.38	0.40	----	----	----	----
Bismuth	7440-69-9	E440/VA	0.20	mg/kg	11.6	12.1	----	----	----	----
Boron	7440-42-8	E440/VA	5.0	mg/kg	228	206	----	----	----	----
Cadmium	7440-43-9	E440/VA	0.020	mg/kg	5.57	6.39	----	----	----	----
Calcium	7440-70-2	E440/VA	50	mg/kg	136000	139000	----	----	----	----
Chromium	7440-47-3	E440/VA	0.50	mg/kg	155	181	----	----	----	----
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	117	363	----	----	----	----
Copper	7440-50-8	E440/VA	0.50	mg/kg	2290	8870	----	----	----	----
Iron	7439-89-6	E440/VA	50	mg/kg	49300	51300	----	----	----	----
Lead	7439-92-1	E440/VA	0.50	mg/kg	436	325	----	----	----	----
Lithium	7439-93-2	E440/VA	2.0	mg/kg	32.0	45.9	----	----	----	----
Magnesium	7439-95-4	E440/VA	20	mg/kg	12200	13400	----	----	----	----
Manganese	7439-96-5	E440/VA	1.0	mg/kg	782	808	----	----	----	----
Mercury	7439-97-6	E510/VA	0.0500	mg/kg	<0.0500	<0.0500	----	----	----	----
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg	27.7	26.8	----	----	----	----
Nickel	7440-02-0	E440/VA	0.50	mg/kg	1130	219	----	----	----	----
Phosphorus	7723-14-0	E440/VA	50	mg/kg	10600	9180	----	----	----	----



Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA 2511-A-11	BA 2511-A-12	----	----	----
Client sampling date / time						12-Mar-2025 09:00	12-Mar-2025 09:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A6050-011	VA25A6050-012	----	----	----	----
					Result	Result	----	----	----	----
Metals										
Potassium	7440-09-7	E440/VA	100	mg/kg	5130	5780	----	----	----	----
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.31	0.30	----	----	----	----
Silver	7440-22-4	E440/VA	0.10	mg/kg	3.28	5.12	----	----	----	----
Sodium	7440-23-5	E440/VA	50	mg/kg	17400	19200	----	----	----	----
Strontium	7440-24-6	E440/VA	0.50	mg/kg	287	333	----	----	----	----
Sulfur	7704-34-9	E440/VA	1000	mg/kg	11200	12400	----	----	----	----
Thallium	7440-28-0	E440/VA	0.050	mg/kg	<0.050	<0.050	----	----	----	----
Tin	7440-31-5	E440/VA	2.0	mg/kg	107	98.0	----	----	----	----
Titanium	7440-32-6	E440/VA	1.0	mg/kg	336	311	----	----	----	----
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	12.4	6.07	----	----	----	----
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.54	1.50	----	----	----	----
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	41.2	40.0	----	----	----	----
Zinc	7440-66-6	E440/VA	2.0	mg/kg	2380	2940	----	----	----	----
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	2.0	2.7	----	----	----	----
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units	11.71	11.63	----	----	----	----
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	5.77	5.53	----	----	----	----
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	2.89	2.89	----	----	----	----
pH, TCLP final	----	EPP444/VA	0.010	pH units	6.47	6.72	----	----	----	----
Antimony, TCLP	7440-36-0	E444/VA	1.00	mg/L	<1.00	<1.00	----	----	----	----
Arsenic, TCLP	7440-38-2	E444/VA	1.0	mg/L	<1.0	<1.0	----	----	----	----



Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)					Client sample ID	BA 2511-A-11	BA 2511-A-12	----	----	----
Client sampling date / time						12-Mar-2025 09:00	12-Mar-2025 09:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A6050-011	VA25A6050-012	----	----	----	----
					Result	Result	----	----	----	----
TCLP Metals										
Barium, TCLP	7440-39-3	E444/VA	2.5	mg/L	<2.5	<2.5	----	----	----	----
Beryllium, TCLP	7440-41-7	E444/VA	0.025	mg/L	<0.025	<0.025	----	----	----	----
Boron, TCLP	7440-42-8	E444/VA	0.50	mg/L	2.19	2.16	----	----	----	----
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L	0.116	0.061	----	----	----	----
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L	2020	2020	----	----	----	----
Chromium, TCLP	7440-47-3	E444/VA	0.25	mg/L	<0.25	<0.25	----	----	----	----
Cobalt, TCLP	7440-48-4	E444/VA	0.050	mg/L	1.60	1.63	----	----	----	----
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L	0.710	0.826	----	----	----	----
Iron, TCLP	7439-89-6	E444/VA	5.0	mg/L	<5.0	<5.0	----	----	----	----
Lead, TCLP	7439-92-1	E444/VA	0.25	mg/L	<0.25	<0.25	----	----	----	----
Magnesium, TCLP	7439-95-4	E444/VA	2.5	mg/L	148	141	----	----	----	----
Mercury, TCLP	7439-97-6	E512/VA	0.0010	mg/L	<0.0010	<0.0010	----	----	----	----
Nickel, TCLP	7440-02-0	E444/VA	0.25	mg/L	0.46	0.43	----	----	----	----
Selenium, TCLP	7782-49-2	E444/VA	0.10	mg/L	<0.10	<0.10	----	----	----	----
Silver, TCLP	7440-22-4	E444/VA	0.050	mg/L	<0.050	<0.050	----	----	----	----
Thallium, TCLP	7440-28-0	E444/VA	1.0	mg/L	<1.0	<1.0	----	----	----	----
Uranium, TCLP	7440-61-1	E444/VA	0.20	mg/L	<0.20	<0.20	----	----	----	----
Vanadium, TCLP	7440-62-2	E444/VA	0.15	mg/L	<0.15	<0.15	----	----	----	----
Zinc, TCLP	7440-66-6	E444/VA	0.50	mg/L	17.7	14.6	----	----	----	----
Zirconium, TCLP	7440-67-7	E444/VA	10	mg/L	<10	<10	----	----	----	----

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

CERTIFICATE OF ANALYSIS

Work Order	: VA25A6050	Page	: 1 of 22
Client	: Veolia Environmental Services Canada	Laboratory	: ALS Environmental - Vancouver
Contact	: Brian Graham	Account Manager	: Gulraj Dhanaua
Address	: 5150 Riverbend Dr. Burnaby BC Canada V3N 4V3	Address	: 8081 Lougheed Highway Burnaby BC Canada V5A 1W9
Telephone	: ----	Telephone	: +1 604 253 4188
Project	: Weekly Bottom Ash	Date Samples Received	: 19-Mar-2025 12:10
PO	: ----	Date Analysis	: 21-Mar-2025
		Commenced	
C-O-C number	: ----	Issue Date	: 25-Mar-2025 12:46
Sampler	: ----		
Site	: Metro Van Ash Sampling Program		
Quote number	: VA25-VIS100-001		
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
Janice Leung	Supervisor - Organics Instrumentation	Organics, Burnaby, British Columbia
Kevin Duarte	Supervisor - Metals ICP Instrumentation	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).
Measurement Uncertainty: The reported uncertainties in this report are expanded uncertainties calculated using a coverage factor of 2, which gives a level of confidence of approximately 95%.
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.

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

>: greater than.

<: less than.

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.

Workorder Comments

The TCLP matrix spike recovery was low (22.7%) for barium. The TCLP extract for the sample (BA 2511-A-1) used for the matrix spike is high in sulfur (302.57 mg/L), and likely contains high sulfate, which would be expected to precipitate the barium as barium sulfate, resulting in a low matrix spike recovery.



Analytical Results

VA25A6050-001

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-1

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Moisture	----	25.1	0.25	%	E144/VA	-	22-Mar-2025	1920383
pH (1:2 soil:water)	----	11.00	0.10	pH units	E108/VA	23-Mar-2025	24-Mar-2025	1920380
Metals								
Aluminum	7429-90-5	38300	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Antimony	7440-36-0	144	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Arsenic	7440-38-2	13.4	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Barium	7440-39-3	633	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Beryllium	7440-41-7	0.43	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Bismuth	7440-69-9	9.57	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Boron	7440-42-8	192	5.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cadmium	7440-43-9	8.41	0.020	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Calcium	7440-70-2	130000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Chromium	7440-47-3	144	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cobalt	7440-48-4	53.8	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Copper	7440-50-8	2870	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Iron	7439-89-6	74100	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lead	7439-92-1	1620	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lithium	7439-93-2	34.2	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Magnesium	7439-95-4	12300	20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Manganese	7439-96-5	724	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Mercury	7439-97-6	0.0945	0.0500	mg/kg	E510/VA	23-Mar-2025	24-Mar-2025	1920381
Molybdenum	7439-98-7	20.0	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Nickel	7440-02-0	162	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Phosphorus	7723-14-0	8100	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Potassium	7440-09-7	5380	100	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Selenium	7782-49-2	0.31	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Silver	7440-22-4	5.16	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sodium	7440-23-5	17500	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Strontium	7440-24-6	272	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sulfur	7704-34-9	11800	1000	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Thallium	7440-28-0	<0.050	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tin	7440-31-5	125	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Titanium	7440-32-6	475	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tungsten	7440-33-7	6.59	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Uranium	7440-61-1	1.38	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Vanadium	7440-62-2	35.6	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zinc	7440-66-6	3150	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zirconium	7440-67-7	1.8	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
TCLP Metals								
pH, TCLP 1st preliminary	----	11.80	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP 2nd preliminary	----	5.34	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP extraction fluid initial	----	2.89	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP final	----	6.86	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
Antimony, TCLP	7440-36-0	<1.00	1.00	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Arsenic, TCLP	7440-38-2	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576



Analytical Results

VA25A6050-001

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-1

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
TCLP Metals								
Barium, TCLP	7440-39-3	<2.5	2.5	mg/L	E444/VA	23-Mar-2025	25-Mar-2025	1920576
Beryllium, TCLP	7440-41-7	<0.025	0.025	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Boron, TCLP	7440-42-8	2.10	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cadmium, TCLP	7440-43-9	0.057	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Calcium, TCLP	7440-70-2	1940	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Chromium, TCLP	7440-47-3	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cobalt, TCLP	7440-48-4	1.65	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Copper, TCLP	7440-50-8	0.712	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Iron, TCLP	7439-89-6	<5.0	5.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Lead, TCLP	7439-92-1	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Magnesium, TCLP	7439-95-4	138	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Mercury, TCLP	7439-97-6	<0.0010	0.0010	mg/L	E512/VA	23-Mar-2025	23-Mar-2025	1920575
Nickel, TCLP	7440-02-0	0.34	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Selenium, TCLP	7782-49-2	<0.10	0.10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Silver, TCLP	7440-22-4	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Thallium, TCLP	7440-28-0	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Uranium, TCLP	7440-61-1	<0.20	0.20	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Vanadium, TCLP	7440-62-2	<0.15	0.15	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zinc, TCLP	7440-66-6	7.91	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zirconium, TCLP	7440-67-7	<10	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576

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

Analytical Results

VA25A6050-002

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-2

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Moisture	----	23.4	0.25	%	E144/VA	-	22-Mar-2025	1920383
pH (1:2 soil:water)	----	10.75	0.10	pH units	E108/VA	23-Mar-2025	24-Mar-2025	1920380
Metals								
Aluminum	7429-90-5	38300	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Antimony	7440-36-0	108	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Arsenic	7440-38-2	17.1	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Barium	7440-39-3	592	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Beryllium	7440-41-7	0.40	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Bismuth	7440-69-9	8.78	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Boron	7440-42-8	222	5.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cadmium	7440-43-9	403	0.020	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Calcium	7440-70-2	144000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Chromium	7440-47-3	410	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cobalt	7440-48-4	50.8	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Copper	7440-50-8	3130	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382



Analytical Results

VA25A6050-002

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-2

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QC/Lot
Metals								
Iron	7439-89-6	64000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lead	7439-92-1	430	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lithium	7439-93-2	32.3	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Magnesium	7439-95-4	13300	20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Manganese	7439-96-5	860	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Mercury	7439-97-6	<0.0500	0.0500	mg/kg	E510/VA	23-Mar-2025	24-Mar-2025	1920381
Molybdenum	7439-98-7	63.2	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Nickel	7440-02-0	817	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Phosphorus	7723-14-0	8710	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Potassium	7440-09-7	5580	100	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Selenium	7782-49-2	0.34	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Silver	7440-22-4	19.3	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sodium	7440-23-5	18200	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Strontium	7440-24-6	287	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sulfur	7704-34-9	13900	1000	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Thallium	7440-28-0	<0.050	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tin	7440-31-5	123	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Titanium	7440-32-6	421	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tungsten	7440-33-7	26.3	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Uranium	7440-61-1	1.55	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Vanadium	7440-62-2	38.3	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zinc	7440-66-6	4300	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zirconium	7440-67-7	2.2	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
TCLP Metals								
pH, TCLP 1st preliminary	----	11.65	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP 2nd preliminary	----	5.42	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP extraction fluid initial	----	2.89	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP final	----	6.79	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
Antimony, TCLP	7440-36-0	<1.00	1.00	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Arsenic, TCLP	7440-38-2	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Barium, TCLP	7440-39-3	<2.5	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Beryllium, TCLP	7440-41-7	<0.025	0.025	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Boron, TCLP	7440-42-8	2.16	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cadmium, TCLP	7440-43-9	0.055	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Calcium, TCLP	7440-70-2	1930	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Chromium, TCLP	7440-47-3	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cobalt, TCLP	7440-48-4	0.907	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Copper, TCLP	7440-50-8	0.821	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Iron, TCLP	7439-89-6	<5.0	5.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Lead, TCLP	7439-92-1	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Magnesium, TCLP	7439-95-4	136	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Mercury, TCLP	7439-97-6	<0.0010	0.0010	mg/L	E512/VA	23-Mar-2025	23-Mar-2025	1920575
Nickel, TCLP	7440-02-0	0.40	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Selenium, TCLP	7782-49-2	<0.10	0.10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Silver, TCLP	7440-22-4	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576



Analytical Results

VA25A6050-002

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-2

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
TCLP Metals								
Thallium, TCLP	7440-28-0	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Uranium, TCLP	7440-61-1	<0.20	0.20	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Vanadium, TCLP	7440-62-2	<0.15	0.15	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zinc, TCLP	7440-66-6	10.6	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zirconium, TCLP	7440-67-7	<10	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576

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

Analytical Results

VA25A6050-003

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-3

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Moisture	----	23.7	0.25	%	E144/VA	-	22-Mar-2025	1920383
pH (1:2 soil:water)	----	10.99	0.10	pH units	E108/VA	23-Mar-2025	24-Mar-2025	1920380
Metals								
Aluminum	7429-90-5	39000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Antimony	7440-36-0	113	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Arsenic	7440-38-2	16.0	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Barium	7440-39-3	603	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Beryllium	7440-41-7	0.38	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Bismuth	7440-69-9	7.83	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Boron	7440-42-8	203	5.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cadmium	7440-43-9	6.39	0.020	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Calcium	7440-70-2	139000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Chromium	7440-47-3	213	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cobalt	7440-48-4	105	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Copper	7440-50-8	1890	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Iron	7439-89-6	55200	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lead	7439-92-1	369	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lithium	7439-93-2	31.4	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Magnesium	7439-95-4	13600	20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Manganese	7439-96-5	752	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Mercury	7439-97-6	<0.0500	0.0500	mg/kg	E510/VA	23-Mar-2025	24-Mar-2025	1920381
Molybdenum	7439-98-7	29.8	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Nickel	7440-02-0	178	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Phosphorus	7723-14-0	10900	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Potassium	7440-09-7	5790	100	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Selenium	7782-49-2	0.36	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Silver	7440-22-4	7.22	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sodium	7440-23-5	18600	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Strontium	7440-24-6	298	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sulfur	7704-34-9	15000	1000	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382



Analytical Results

VA25A6050-003

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-3

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Metals								
Thallium	7440-28-0	<0.050	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tin	7440-31-5	113	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Titanium	7440-32-6	390	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tungsten	7440-33-7	8.23	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Uranium	7440-61-1	1.56	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Vanadium	7440-62-2	41.0	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zinc	7440-66-6	2730	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zirconium	7440-67-7	2.4	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
TCLP Metals								
pH, TCLP 1st preliminary	----	11.71	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP 2nd preliminary	----	5.15	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP extraction fluid initial	----	2.89	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP final	----	6.83	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
Antimony, TCLP	7440-36-0	<1.00	1.00	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Arsenic, TCLP	7440-38-2	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Barium, TCLP	7440-39-3	<2.5	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Beryllium, TCLP	7440-41-7	<0.025	0.025	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Boron, TCLP	7440-42-8	2.14	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cadmium, TCLP	7440-43-9	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Calcium, TCLP	7440-70-2	1910	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Chromium, TCLP	7440-47-3	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cobalt, TCLP	7440-48-4	0.862	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Copper, TCLP	7440-50-8	0.744	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Iron, TCLP	7439-89-6	<5.0	5.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Lead, TCLP	7439-92-1	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Magnesium, TCLP	7439-95-4	129	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Mercury, TCLP	7439-97-6	<0.0010	0.0010	mg/L	E512/VA	23-Mar-2025	23-Mar-2025	1920575
Nickel, TCLP	7440-02-0	0.30	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Selenium, TCLP	7782-49-2	<0.10	0.10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Silver, TCLP	7440-22-4	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Thallium, TCLP	7440-28-0	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Uranium, TCLP	7440-61-1	<0.20	0.20	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Vanadium, TCLP	7440-62-2	<0.15	0.15	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zinc, TCLP	7440-66-6	19.3	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zirconium, TCLP	7440-67-7	<10	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576

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

Analytical Results

VA25A6050-004

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-4

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								



Analytical Results

VA25A6050-004

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-4

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Moisture	----	25.3	0.25	%	E144/VA	-	22-Mar-2025	1920383
pH (1:2 soil:water)	----	11.04	0.10	pH units	E108/VA	23-Mar-2025	24-Mar-2025	1920380
Metals								
Aluminum	7429-90-5	54500	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Antimony	7440-36-0	124	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Arsenic	7440-38-2	14.9	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Barium	7440-39-3	516	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Beryllium	7440-41-7	0.40	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Bismuth	7440-69-9	8.49	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Boron	7440-42-8	252	5.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cadmium	7440-43-9	5.22	0.020	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Calcium	7440-70-2	140000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Chromium	7440-47-3	144	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cobalt	7440-48-4	502	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Copper	7440-50-8	1220	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Iron	7439-89-6	48100	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lead	7439-92-1	1190	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lithium	7439-93-2	47.0	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Magnesium	7439-95-4	13200	20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Manganese	7439-96-5	830	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Mercury	7439-97-6	<0.0500	0.0500	mg/kg	E510/VA	23-Mar-2025	24-Mar-2025	1920381
Molybdenum	7439-98-7	27.6	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Nickel	7440-02-0	143	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Phosphorus	7723-14-0	9720	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Potassium	7440-09-7	5980	100	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Selenium	7782-49-2	0.34	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Silver	7440-22-4	4.89	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sodium	7440-23-5	18100	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Strontium	7440-24-6	297	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sulfur	7704-34-9	14400	1000	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Thallium	7440-28-0	<0.050	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tin	7440-31-5	114	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Titanium	7440-32-6	494	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tungsten	7440-33-7	8.14	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Uranium	7440-61-1	1.63	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Vanadium	7440-62-2	39.6	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zinc	7440-66-6	3600	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zirconium	7440-67-7	4.3	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
TCLP Metals								
pH, TCLP 1st preliminary	----	11.77	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP 2nd preliminary	----	5.72	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP extraction fluid initial	----	2.89	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP final	----	6.74	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
Antimony, TCLP	7440-36-0	<1.00	1.00	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Arsenic, TCLP	7440-38-2	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576



Analytical Results

VA25A6050-004

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-4

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
TCLP Metals								
Barium, TCLP	7440-39-3	<2.5	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Beryllium, TCLP	7440-41-7	<0.025	0.025	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Boron, TCLP	7440-42-8	2.24	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cadmium, TCLP	7440-43-9	0.064	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Calcium, TCLP	7440-70-2	2000	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Chromium, TCLP	7440-47-3	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cobalt, TCLP	7440-48-4	0.904	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Copper, TCLP	7440-50-8	0.788	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Iron, TCLP	7439-89-6	<5.0	5.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Lead, TCLP	7439-92-1	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Magnesium, TCLP	7439-95-4	144	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Mercury, TCLP	7439-97-6	<0.0010	0.0010	mg/L	E512/VA	23-Mar-2025	23-Mar-2025	1920575
Nickel, TCLP	7440-02-0	0.41	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Selenium, TCLP	7782-49-2	<0.10	0.10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Silver, TCLP	7440-22-4	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Thallium, TCLP	7440-28-0	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Uranium, TCLP	7440-61-1	<0.20	0.20	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Vanadium, TCLP	7440-62-2	<0.15	0.15	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zinc, TCLP	7440-66-6	14.1	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zirconium, TCLP	7440-67-7	<10	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576

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

Analytical Results

VA25A6050-005

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-5

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Moisture	----	25.3	0.25	%	E144/VA	-	22-Mar-2025	1920383
pH (1:2 soil:water)	----	10.87	0.10	pH units	E108/VA	23-Mar-2025	24-Mar-2025	1920380
Metals								
Aluminum	7429-90-5	42800	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Antimony	7440-36-0	111	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Arsenic	7440-38-2	15.0	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Barium	7440-39-3	611	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Beryllium	7440-41-7	0.40	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Bismuth	7440-69-9	8.50	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Boron	7440-42-8	216	5.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cadmium	7440-43-9	9.25	0.020	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Calcium	7440-70-2	137000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Chromium	7440-47-3	155	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cobalt	7440-48-4	55.9	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Copper	7440-50-8	6040	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382



Analytical Results

VA25A6050-005

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-5

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QC/Lot
Metals								
Iron	7439-89-6	47000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lead	7439-92-1	353	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lithium	7439-93-2	31.3	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Magnesium	7439-95-4	12000	20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Manganese	7439-96-5	814	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Mercury	7439-97-6	<0.0500	0.0500	mg/kg	E510/VA	23-Mar-2025	24-Mar-2025	1920381
Molybdenum	7439-98-7	26.4	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Nickel	7440-02-0	208	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Phosphorus	7723-14-0	10700	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Potassium	7440-09-7	5630	100	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Selenium	7782-49-2	0.28	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Silver	7440-22-4	4.07	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sodium	7440-23-5	17700	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Strontium	7440-24-6	320	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sulfur	7704-34-9	10500	1000	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Thallium	7440-28-0	<0.050	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tin	7440-31-5	103	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Titanium	7440-32-6	447	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tungsten	7440-33-7	7.86	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Uranium	7440-61-1	1.48	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Vanadium	7440-62-2	36.6	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zinc	7440-66-6	4810	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zirconium	7440-67-7	3.0	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
TCLP Metals								
pH, TCLP 1st preliminary	----	11.75	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP 2nd preliminary	----	5.86	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP extraction fluid initial	----	2.89	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP final	----	6.47	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
Antimony, TCLP	7440-36-0	<1.00	1.00	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Arsenic, TCLP	7440-38-2	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Barium, TCLP	7440-39-3	<2.5	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Beryllium, TCLP	7440-41-7	<0.025	0.025	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Boron, TCLP	7440-42-8	2.37	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cadmium, TCLP	7440-43-9	0.097	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Calcium, TCLP	7440-70-2	2090	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Chromium, TCLP	7440-47-3	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cobalt, TCLP	7440-48-4	1.45	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Copper, TCLP	7440-50-8	0.975	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Iron, TCLP	7439-89-6	<5.0	5.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Lead, TCLP	7439-92-1	0.36	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Magnesium, TCLP	7439-95-4	156	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Mercury, TCLP	7439-97-6	<0.0010	0.0010	mg/L	E512/VA	23-Mar-2025	23-Mar-2025	1920575
Nickel, TCLP	7440-02-0	0.40	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Selenium, TCLP	7782-49-2	<0.10	0.10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Silver, TCLP	7440-22-4	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576



Analytical Results

VA25A6050-005

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-5

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
TCLP Metals								
Thallium, TCLP	7440-28-0	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Uranium, TCLP	7440-61-1	<0.20	0.20	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Vanadium, TCLP	7440-62-2	<0.15	0.15	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zinc, TCLP	7440-66-6	31.3	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zirconium, TCLP	7440-67-7	<10	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576

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

Analytical Results

VA25A6050-006

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-6

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Moisture	----	24.8	0.25	%	E144/VA	-	22-Mar-2025	1920383
pH (1:2 soil:water)	----	10.88	0.10	pH units	E108/VA	23-Mar-2025	24-Mar-2025	1920380
Metals								
Aluminum	7429-90-5	41700	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Antimony	7440-36-0	99.3	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Arsenic	7440-38-2	13.5	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Barium	7440-39-3	562	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Beryllium	7440-41-7	0.38	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Bismuth	7440-69-9	16.1	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Boron	7440-42-8	279	5.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cadmium	7440-43-9	6.08	0.020	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Calcium	7440-70-2	134000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Chromium	7440-47-3	141	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cobalt	7440-48-4	107	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Copper	7440-50-8	14100	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Iron	7439-89-6	57600	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lead	7439-92-1	401	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lithium	7439-93-2	37.4	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Magnesium	7439-95-4	11600	20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Manganese	7439-96-5	783	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Mercury	7439-97-6	<0.0500	0.0500	mg/kg	E510/VA	23-Mar-2025	24-Mar-2025	1920381
Molybdenum	7439-98-7	27.0	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Nickel	7440-02-0	709	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Phosphorus	7723-14-0	9660	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Potassium	7440-09-7	5330	100	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Selenium	7782-49-2	0.35	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Silver	7440-22-4	10.5	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sodium	7440-23-5	17300	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Strontium	7440-24-6	280	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sulfur	7704-34-9	11800	1000	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382



Analytical Results

VA25A6050-006

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-6

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Metals								
Thallium	7440-28-0	<0.050	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tin	7440-31-5	168	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Titanium	7440-32-6	417	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tungsten	7440-33-7	8.17	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Uranium	7440-61-1	1.51	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Vanadium	7440-62-2	35.7	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zinc	7440-66-6	5450	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zirconium	7440-67-7	2.9	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
TCLP Metals								
pH, TCLP 1st preliminary	----	11.68	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP 2nd preliminary	----	5.58	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP extraction fluid initial	----	2.89	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP final	----	6.55	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
Antimony, TCLP	7440-36-0	<1.00	1.00	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Arsenic, TCLP	7440-38-2	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Barium, TCLP	7440-39-3	<2.5	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Beryllium, TCLP	7440-41-7	<0.025	0.025	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Boron, TCLP	7440-42-8	2.33	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cadmium, TCLP	7440-43-9	0.130	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Calcium, TCLP	7440-70-2	2120	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Chromium, TCLP	7440-47-3	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cobalt, TCLP	7440-48-4	1.12	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Copper, TCLP	7440-50-8	0.959	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Iron, TCLP	7439-89-6	<5.0	5.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Lead, TCLP	7439-92-1	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Magnesium, TCLP	7439-95-4	151	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Mercury, TCLP	7439-97-6	<0.0010	0.0010	mg/L	E512/VA	23-Mar-2025	23-Mar-2025	1920575
Nickel, TCLP	7440-02-0	0.46	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Selenium, TCLP	7782-49-2	<0.10	0.10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Silver, TCLP	7440-22-4	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Thallium, TCLP	7440-28-0	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Uranium, TCLP	7440-61-1	<0.20	0.20	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Vanadium, TCLP	7440-62-2	<0.15	0.15	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zinc, TCLP	7440-66-6	16.8	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zirconium, TCLP	7440-67-7	<10	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576

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

Analytical Results

VA25A6050-007

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-7

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								



Analytical Results

VA25A6050-007

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-7

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QC/Lot
Physical Tests								
Moisture	----	25.0	0.25	%	E144/VA	-	22-Mar-2025	1920383
pH (1:2 soil:water)	----	11.34	0.10	pH units	E108/VA	23-Mar-2025	24-Mar-2025	1920380
Metals								
Aluminum	7429-90-5	33500	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Antimony	7440-36-0	82.2	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Arsenic	7440-38-2	13.7	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Barium	7440-39-3	558	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Beryllium	7440-41-7	0.46	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Bismuth	7440-69-9	8.47	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Boron	7440-42-8	206	5.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cadmium	7440-43-9	5.56	0.020	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Calcium	7440-70-2	137000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Chromium	7440-47-3	259	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cobalt	7440-48-4	176	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Copper	7440-50-8	5980	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Iron	7439-89-6	56100	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lead	7439-92-1	324	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lithium	7439-93-2	40.1	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Magnesium	7439-95-4	13300	20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Manganese	7439-96-5	895	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Mercury	7439-97-6	<0.0500	0.0500	mg/kg	E510/VA	23-Mar-2025	24-Mar-2025	1920381
Molybdenum	7439-98-7	27.1	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Nickel	7440-02-0	218	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Phosphorus	7723-14-0	8640	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Potassium	7440-09-7	5170	100	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Selenium	7782-49-2	0.32	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Silver	7440-22-4	3.58	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sodium	7440-23-5	16400	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Strontium	7440-24-6	329	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sulfur	7704-34-9	10700	1000	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Thallium	7440-28-0	<0.050	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tin	7440-31-5	102	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Titanium	7440-32-6	235	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tungsten	7440-33-7	7.60	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Uranium	7440-61-1	1.65	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Vanadium	7440-62-2	39.6	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zinc	7440-66-6	4090	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zirconium	7440-67-7	3.3	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
TCLP Metals								
pH, TCLP 1st preliminary	----	11.79	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP 2nd preliminary	----	5.87	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP extraction fluid initial	----	2.89	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP final	----	6.67	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
Antimony, TCLP	7440-36-0	<1.00	1.00	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Arsenic, TCLP	7440-38-2	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576



Analytical Results

VA25A6050-007

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-7

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
TCLP Metals								
Barium, TCLP	7440-39-3	<2.5	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Beryllium, TCLP	7440-41-7	<0.025	0.025	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Boron, TCLP	7440-42-8	2.41	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cadmium, TCLP	7440-43-9	0.792	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Calcium, TCLP	7440-70-2	2100	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Chromium, TCLP	7440-47-3	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cobalt, TCLP	7440-48-4	1.18	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Copper, TCLP	7440-50-8	0.838	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Iron, TCLP	7439-89-6	<5.0	5.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Lead, TCLP	7439-92-1	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Magnesium, TCLP	7439-95-4	153	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Mercury, TCLP	7439-97-6	<0.0010	0.0010	mg/L	E512/VA	23-Mar-2025	23-Mar-2025	1920575
Nickel, TCLP	7440-02-0	0.36	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Selenium, TCLP	7782-49-2	<0.10	0.10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Silver, TCLP	7440-22-4	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Thallium, TCLP	7440-28-0	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Uranium, TCLP	7440-61-1	<0.20	0.20	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Vanadium, TCLP	7440-62-2	<0.15	0.15	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zinc, TCLP	7440-66-6	14.9	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zirconium, TCLP	7440-67-7	<10	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576

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

Analytical Results

VA25A6050-008

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-8

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Moisture	----	23.8	0.25	%	E144/VA	-	22-Mar-2025	1920383
pH (1:2 soil:water)	----	10.86	0.10	pH units	E108/VA	23-Mar-2025	24-Mar-2025	1920380
Metals								
Aluminum	7429-90-5	41800	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Antimony	7440-36-0	86.1	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Arsenic	7440-38-2	15.3	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Barium	7440-39-3	637	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Beryllium	7440-41-7	0.40	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Bismuth	7440-69-9	8.07	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Boron	7440-42-8	184	5.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cadmium	7440-43-9	5.91	0.020	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Calcium	7440-70-2	134000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Chromium	7440-47-3	204	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cobalt	7440-48-4	82.3	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Copper	7440-50-8	4830	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382



Analytical Results

VA25A6050-008

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-8

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QC/Lot
Metals								
Iron	7439-89-6	60600	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lead	7439-92-1	518	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lithium	7439-93-2	32.0	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Magnesium	7439-95-4	13800	20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Manganese	7439-96-5	813	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Mercury	7439-97-6	<0.0500	0.0500	mg/kg	E510/VA	23-Mar-2025	24-Mar-2025	1920381
Molybdenum	7439-98-7	26.9	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Nickel	7440-02-0	177	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Phosphorus	7723-14-0	9030	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Potassium	7440-09-7	6100	100	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Selenium	7782-49-2	0.25	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Silver	7440-22-4	5.20	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sodium	7440-23-5	18800	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Strontium	7440-24-6	288	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sulfur	7704-34-9	12700	1000	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Thallium	7440-28-0	<0.050	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tin	7440-31-5	119	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Titanium	7440-32-6	306	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tungsten	7440-33-7	5.46	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Uranium	7440-61-1	1.47	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Vanadium	7440-62-2	36.7	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zinc	7440-66-6	4700	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zirconium	7440-67-7	3.9	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
TCLP Metals								
pH, TCLP 1st preliminary	----	11.74	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP 2nd preliminary	----	5.47	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP extraction fluid initial	----	2.89	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP final	----	6.53	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
Antimony, TCLP	7440-36-0	<1.00	1.00	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Arsenic, TCLP	7440-38-2	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Barium, TCLP	7440-39-3	<2.5	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Beryllium, TCLP	7440-41-7	<0.025	0.025	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Boron, TCLP	7440-42-8	2.55	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cadmium, TCLP	7440-43-9	0.087	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Calcium, TCLP	7440-70-2	2180	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Chromium, TCLP	7440-47-3	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cobalt, TCLP	7440-48-4	0.958	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Copper, TCLP	7440-50-8	0.984	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Iron, TCLP	7439-89-6	<5.0	5.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Lead, TCLP	7439-92-1	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Magnesium, TCLP	7439-95-4	150	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Mercury, TCLP	7439-97-6	<0.0010	0.0010	mg/L	E512/VA	23-Mar-2025	23-Mar-2025	1920575
Nickel, TCLP	7440-02-0	0.51	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Selenium, TCLP	7782-49-2	<0.10	0.10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Silver, TCLP	7440-22-4	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576



Analytical Results

VA25A6050-008

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-8

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
TCLP Metals								
Thallium, TCLP	7440-28-0	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Uranium, TCLP	7440-61-1	<0.20	0.20	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Vanadium, TCLP	7440-62-2	<0.15	0.15	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zinc, TCLP	7440-66-6	24.5	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zirconium, TCLP	7440-67-7	<10	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576

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

Analytical Results

VA25A6050-009

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-9

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Moisture	----	24.1	0.25	%	E144/VA	-	22-Mar-2025	1920383
pH (1:2 soil:water)	----	11.00	0.10	pH units	E108/VA	23-Mar-2025	24-Mar-2025	1920380
Metals								
Aluminum	7429-90-5	34400	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Antimony	7440-36-0	98.5	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Arsenic	7440-38-2	20.9	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Barium	7440-39-3	575	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Beryllium	7440-41-7	0.51	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Bismuth	7440-69-9	9.95	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Boron	7440-42-8	208	5.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cadmium	7440-43-9	6.56	0.020	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Calcium	7440-70-2	139000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Chromium	7440-47-3	164	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cobalt	7440-48-4	151	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Copper	7440-50-8	1880	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Iron	7439-89-6	54400	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lead	7439-92-1	345	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lithium	7439-93-2	32.7	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Magnesium	7439-95-4	13400	20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Manganese	7439-96-5	846	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Mercury	7439-97-6	<0.0500	0.0500	mg/kg	E510/VA	23-Mar-2025	24-Mar-2025	1920381
Molybdenum	7439-98-7	27.6	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Nickel	7440-02-0	181	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Phosphorus	7723-14-0	10300	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Potassium	7440-09-7	5460	100	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Selenium	7782-49-2	0.36	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Silver	7440-22-4	3.69	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sodium	7440-23-5	17000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Strontium	7440-24-6	287	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sulfur	7704-34-9	12500	1000	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382



Analytical Results

VA25A6050-009

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-9

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Metals								
Thallium	7440-28-0	<0.050	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tin	7440-31-5	106	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Titanium	7440-32-6	242	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tungsten	7440-33-7	7.26	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Uranium	7440-61-1	1.44	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Vanadium	7440-62-2	39.2	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zinc	7440-66-6	3670	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zirconium	7440-67-7	2.8	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
TCLP Metals								
pH, TCLP 1st preliminary	----	11.70	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP 2nd preliminary	----	5.70	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP extraction fluid initial	----	2.89	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP final	----	6.58	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
Antimony, TCLP	7440-36-0	<1.00	1.00	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Arsenic, TCLP	7440-38-2	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Barium, TCLP	7440-39-3	<2.5	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Beryllium, TCLP	7440-41-7	<0.025	0.025	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Boron, TCLP	7440-42-8	2.34	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cadmium, TCLP	7440-43-9	0.099	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Calcium, TCLP	7440-70-2	2120	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Chromium, TCLP	7440-47-3	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cobalt, TCLP	7440-48-4	1.17	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Copper, TCLP	7440-50-8	1.04	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Iron, TCLP	7439-89-6	<5.0	5.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Lead, TCLP	7439-92-1	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Magnesium, TCLP	7439-95-4	149	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Mercury, TCLP	7439-97-6	<0.0010	0.0010	mg/L	E512/VA	23-Mar-2025	23-Mar-2025	1920575
Nickel, TCLP	7440-02-0	0.45	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Selenium, TCLP	7782-49-2	<0.10	0.10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Silver, TCLP	7440-22-4	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Thallium, TCLP	7440-28-0	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Uranium, TCLP	7440-61-1	<0.20	0.20	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Vanadium, TCLP	7440-62-2	<0.15	0.15	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zinc, TCLP	7440-66-6	22.4	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zirconium, TCLP	7440-67-7	<10	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576

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

Analytical Results

VA25A6050-010

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-10

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								



Analytical Results

VA25A6050-010

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-10

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Moisture	----	24.4	0.25	%	E144/VA	-	22-Mar-2025	1920383
pH (1:2 soil:water)	----	10.97	0.10	pH units	E108/VA	23-Mar-2025	24-Mar-2025	1920380
Metals								
Aluminum	7429-90-5	33300	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Antimony	7440-36-0	98.0	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Arsenic	7440-38-2	15.9	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Barium	7440-39-3	552	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Beryllium	7440-41-7	0.39	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Bismuth	7440-69-9	9.23	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Boron	7440-42-8	198	5.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cadmium	7440-43-9	6.24	0.020	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Calcium	7440-70-2	139000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Chromium	7440-47-3	334	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cobalt	7440-48-4	168	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Copper	7440-50-8	1340	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Iron	7439-89-6	68200	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lead	7439-92-1	1560	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lithium	7439-93-2	37.2	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Magnesium	7439-95-4	12800	20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Manganese	7439-96-5	1240	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Mercury	7439-97-6	<0.0500	0.0500	mg/kg	E510/VA	23-Mar-2025	24-Mar-2025	1920381
Molybdenum	7439-98-7	27.6	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Nickel	7440-02-0	176	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Phosphorus	7723-14-0	10600	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Potassium	7440-09-7	5580	100	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Selenium	7782-49-2	0.34	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Silver	7440-22-4	4.12	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sodium	7440-23-5	16900	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Strontium	7440-24-6	295	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sulfur	7704-34-9	12800	1000	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Thallium	7440-28-0	<0.050	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tin	7440-31-5	100	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Titanium	7440-32-6	243	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tungsten	7440-33-7	7.36	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Uranium	7440-61-1	1.52	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Vanadium	7440-62-2	43.7	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zinc	7440-66-6	3520	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zirconium	7440-67-7	3.2	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
TCLP Metals								
pH, TCLP 1st preliminary	----	11.72	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP 2nd preliminary	----	5.55	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP extraction fluid initial	----	2.89	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP final	----	6.55	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
Antimony, TCLP	7440-36-0	<1.00	1.00	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Arsenic, TCLP	7440-38-2	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576



Analytical Results

VA25A6050-010

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-10

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
TCLP Metals								
Barium, TCLP	7440-39-3	<2.5	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Beryllium, TCLP	7440-41-7	<0.025	0.025	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Boron, TCLP	7440-42-8	2.34	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cadmium, TCLP	7440-43-9	0.072	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Calcium, TCLP	7440-70-2	2050	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Chromium, TCLP	7440-47-3	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cobalt, TCLP	7440-48-4	1.50	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Copper, TCLP	7440-50-8	0.786	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Iron, TCLP	7439-89-6	<5.0	5.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Lead, TCLP	7439-92-1	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Magnesium, TCLP	7439-95-4	154	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Mercury, TCLP	7439-97-6	<0.0010	0.0010	mg/L	E512/VA	23-Mar-2025	23-Mar-2025	1920575
Nickel, TCLP	7440-02-0	0.60	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Selenium, TCLP	7782-49-2	<0.10	0.10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Silver, TCLP	7440-22-4	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Thallium, TCLP	7440-28-0	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Uranium, TCLP	7440-61-1	<0.20	0.20	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Vanadium, TCLP	7440-62-2	<0.15	0.15	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zinc, TCLP	7440-66-6	20.3	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zirconium, TCLP	7440-67-7	<10	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576

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

Analytical Results

VA25A6050-011

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-11

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Moisture	----	23.7	0.25	%	E144/VA	-	22-Mar-2025	1920383
pH (1:2 soil:water)	----	11.08	0.10	pH units	E108/VA	23-Mar-2025	24-Mar-2025	1920380
Metals								
Aluminum	7429-90-5	34200	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Antimony	7440-36-0	89.5	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Arsenic	7440-38-2	15.0	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Barium	7440-39-3	625	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Beryllium	7440-41-7	0.38	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Bismuth	7440-69-9	11.6	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Boron	7440-42-8	228	5.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cadmium	7440-43-9	5.57	0.020	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Calcium	7440-70-2	136000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Chromium	7440-47-3	155	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cobalt	7440-48-4	117	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Copper	7440-50-8	2290	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382



Analytical Results

VA25A6050-011

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-11

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QC/Lot
Metals								
Iron	7439-89-6	49300	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lead	7439-92-1	436	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lithium	7439-93-2	32.0	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Magnesium	7439-95-4	12200	20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Manganese	7439-96-5	782	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Mercury	7439-97-6	<0.0500	0.0500	mg/kg	E510/VA	23-Mar-2025	24-Mar-2025	1920381
Molybdenum	7439-98-7	27.7	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Nickel	7440-02-0	1130	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Phosphorus	7723-14-0	10600	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Potassium	7440-09-7	5130	100	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Selenium	7782-49-2	0.31	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Silver	7440-22-4	3.28	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sodium	7440-23-5	17400	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Strontium	7440-24-6	287	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sulfur	7704-34-9	11200	1000	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Thallium	7440-28-0	<0.050	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tin	7440-31-5	107	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Titanium	7440-32-6	336	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tungsten	7440-33-7	12.4	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Uranium	7440-61-1	1.54	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Vanadium	7440-62-2	41.2	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zinc	7440-66-6	2380	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zirconium	7440-67-7	2.0	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
TCLP Metals								
pH, TCLP 1st preliminary	----	11.71	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP 2nd preliminary	----	5.77	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP extraction fluid initial	----	2.89	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP final	----	6.47	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
Antimony, TCLP	7440-36-0	<1.00	1.00	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Arsenic, TCLP	7440-38-2	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Barium, TCLP	7440-39-3	<2.5	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Beryllium, TCLP	7440-41-7	<0.025	0.025	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Boron, TCLP	7440-42-8	2.19	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cadmium, TCLP	7440-43-9	0.116	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Calcium, TCLP	7440-70-2	2020	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Chromium, TCLP	7440-47-3	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cobalt, TCLP	7440-48-4	1.60	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Copper, TCLP	7440-50-8	0.710	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Iron, TCLP	7439-89-6	<5.0	5.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Lead, TCLP	7439-92-1	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Magnesium, TCLP	7439-95-4	148	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Mercury, TCLP	7439-97-6	<0.0010	0.0010	mg/L	E512/VA	23-Mar-2025	23-Mar-2025	1920575
Nickel, TCLP	7440-02-0	0.46	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Selenium, TCLP	7782-49-2	<0.10	0.10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Silver, TCLP	7440-22-4	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576



Analytical Results

VA25A6050-011

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-11

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
TCLP Metals								
Thallium, TCLP	7440-28-0	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Uranium, TCLP	7440-61-1	<0.20	0.20	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Vanadium, TCLP	7440-62-2	<0.15	0.15	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zinc, TCLP	7440-66-6	17.7	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zirconium, TCLP	7440-67-7	<10	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576

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

Analytical Results

VA25A6050-012

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-12

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Moisture	----	24.2	0.25	%	E144/VA	-	22-Mar-2025	1920383
pH (1:2 soil:water)	----	10.98	0.10	pH units	E108/VA	23-Mar-2025	24-Mar-2025	1920380
Metals								
Aluminum	7429-90-5	34200	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Antimony	7440-36-0	117	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Arsenic	7440-38-2	16.9	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Barium	7440-39-3	473	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Beryllium	7440-41-7	0.40	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Bismuth	7440-69-9	12.1	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Boron	7440-42-8	206	5.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cadmium	7440-43-9	6.39	0.020	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Calcium	7440-70-2	139000	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Chromium	7440-47-3	181	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Cobalt	7440-48-4	363	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Copper	7440-50-8	8870	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Iron	7439-89-6	51300	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lead	7439-92-1	325	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Lithium	7439-93-2	45.9	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Magnesium	7439-95-4	13400	20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Manganese	7439-96-5	808	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Mercury	7439-97-6	<0.0500	0.0500	mg/kg	E510/VA	23-Mar-2025	24-Mar-2025	1920381
Molybdenum	7439-98-7	26.8	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Nickel	7440-02-0	219	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Phosphorus	7723-14-0	9180	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Potassium	7440-09-7	5780	100	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Selenium	7782-49-2	0.30	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Silver	7440-22-4	5.12	0.10	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sodium	7440-23-5	19200	50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Strontium	7440-24-6	333	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Sulfur	7704-34-9	12400	1000	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382



Analytical Results

VA25A6050-012

Sub-Matrix: Soil

(Matrix: Soil/Solid)

Client sample ID: BA 2511-A-12

Client sampling date / time: 12-Mar-2025 09:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Metals								
Thallium	7440-28-0	<0.050	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tin	7440-31-5	98.0	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Titanium	7440-32-6	311	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Tungsten	7440-33-7	6.07	0.50	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Uranium	7440-61-1	1.50	0.050	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Vanadium	7440-62-2	40.0	0.20	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zinc	7440-66-6	2940	2.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
Zirconium	7440-67-7	2.7	1.0	mg/kg	E440/VA	23-Mar-2025	24-Mar-2025	1920382
TCLP Metals								
pH, TCLP 1st preliminary	----	11.63	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP 2nd preliminary	----	5.53	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP extraction fluid initial	----	2.89	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
pH, TCLP final	----	6.72	0.010	pH units	EPP444/VA	-	21-Mar-2025	-
Antimony, TCLP	7440-36-0	<1.00	1.00	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Arsenic, TCLP	7440-38-2	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Barium, TCLP	7440-39-3	<2.5	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Beryllium, TCLP	7440-41-7	<0.025	0.025	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Boron, TCLP	7440-42-8	2.16	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cadmium, TCLP	7440-43-9	0.061	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Calcium, TCLP	7440-70-2	2020	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Chromium, TCLP	7440-47-3	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Cobalt, TCLP	7440-48-4	1.63	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Copper, TCLP	7440-50-8	0.826	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Iron, TCLP	7439-89-6	<5.0	5.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Lead, TCLP	7439-92-1	<0.25	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Magnesium, TCLP	7439-95-4	141	2.5	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Mercury, TCLP	7439-97-6	<0.0010	0.0010	mg/L	E512/VA	23-Mar-2025	23-Mar-2025	1920575
Nickel, TCLP	7440-02-0	0.43	0.25	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Selenium, TCLP	7782-49-2	<0.10	0.10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Silver, TCLP	7440-22-4	<0.050	0.050	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Thallium, TCLP	7440-28-0	<1.0	1.0	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Uranium, TCLP	7440-61-1	<0.20	0.20	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Vanadium, TCLP	7440-62-2	<0.15	0.15	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zinc, TCLP	7440-66-6	14.6	0.50	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576
Zirconium, TCLP	7440-67-7	<10	10	mg/L	E444/VA	23-Mar-2025	24-Mar-2025	1920576

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

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: VA25A6050	Page	: 1 of 16
Client	: Veolia Environmental Services Canada	Laboratory	: ALS Environmental - Vancouver
Contact	: Brian Graham	Account Manager	: Gulraj Dhanaua
Address	: 5150 Riverbend Dr. Burnaby BC Canada V3N 4V3	Address	: 8081 Lougheed Highway Burnaby, British Columbia Canada V5A 1W9
Telephone	: ----	Telephone	: +1 604 253 4188
Project	: Weekly Bottom Ash	Date Samples Received	: 19-Mar-2025 12:10
PO	: ----	Issue Date	: 25-Mar-2025 12:46
C-O-C number	: ----		
Sampler	: ----		
Site	: Metro Van Ash Sampling Program		
Quote number	: VA25-VISI100-001		
No. of samples received	: 12		
No. of samples analysed	: 12		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- Duplicate outliers occur - please see following pages for full details.
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: Soil/Solid

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Duplicate (DUP) RPDs								
Metals	VA25A6050-001	BA 2511-A-1	Antimony	7440-36-0	E440	31.1 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A6050-001	BA 2511-A-1	Cadmium	7440-43-9	E440	38.7 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A6050-001	BA 2511-A-1	Chromium	7440-47-3	E440	44.0 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A6050-001	BA 2511-A-1	Cobalt	7440-48-4	E440	76.1 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A6050-001	BA 2511-A-1	Lead	7439-92-1	E440	120 % DUP-H	40%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A6050-001	BA 2511-A-1	Molybdenum	7439-98-7	E440	49.6 % DUP-H	40%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A6050-001	BA 2511-A-1	Nickel	7440-02-0	E440	62.1 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A6050-001	BA 2511-A-1	Titanium	7440-32-6	E440	52.9 % DUP-H	40%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25A6050-001	BA 2511-A-1	Tungsten	7440-33-7	E440	30.7 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.

Result Qualifiers

Qualifier Description

DUP-H Duplicate results outside ALS DQO, due to sample heterogeneity.

Matrix Spike (MS) Recoveries

TCLP Metals	VA25A6050-001	BA 2511-A-1	Barium, TCLP	7440-39-3	E444	22.7 % RRQC	50.0-140%	Recovery less than lower data quality objective
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Result Qualifiers

Qualifier Description

RRQC Refer to report comments for information regarding this QC result.



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Soil/Solid**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2511-A-1	E510	12-Mar-2025	23-Mar-2025	28 days	11 days	✓	24-Mar-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2511-A-10	E510	12-Mar-2025	23-Mar-2025	28 days	11 days	✓	24-Mar-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2511-A-11	E510	12-Mar-2025	23-Mar-2025	28 days	11 days	✓	24-Mar-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2511-A-12	E510	12-Mar-2025	23-Mar-2025	28 days	11 days	✓	24-Mar-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2511-A-2	E510	12-Mar-2025	23-Mar-2025	28 days	11 days	✓	24-Mar-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2511-A-3	E510	12-Mar-2025	23-Mar-2025	28 days	11 days	✓	24-Mar-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2511-A-4	E510	12-Mar-2025	23-Mar-2025	28 days	11 days	✓	24-Mar-2025	28 days	1 days	✓



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2511-A-5	E510	12-Mar-2025	23-Mar-2025	28 days	11 days	✔	24-Mar-2025	28 days	1 days	✔
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2511-A-6	E510	12-Mar-2025	23-Mar-2025	28 days	11 days	✔	24-Mar-2025	28 days	1 days	✔
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2511-A-7	E510	12-Mar-2025	23-Mar-2025	28 days	11 days	✔	24-Mar-2025	28 days	1 days	✔
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2511-A-8	E510	12-Mar-2025	23-Mar-2025	28 days	11 days	✔	24-Mar-2025	28 days	1 days	✔
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2511-A-9	E510	12-Mar-2025	23-Mar-2025	28 days	11 days	✔	24-Mar-2025	28 days	1 days	✔
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2511-A-1	E440	12-Mar-2025	23-Mar-2025	180 days	11 days	✔	24-Mar-2025	180 days	12 days	✔
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2511-A-10	E440	12-Mar-2025	23-Mar-2025	180 days	11 days	✔	24-Mar-2025	180 days	12 days	✔
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2511-A-11	E440	12-Mar-2025	23-Mar-2025	180 days	11 days	✔	24-Mar-2025	180 days	12 days	✔
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2511-A-12	E440	12-Mar-2025	23-Mar-2025	180 days	11 days	✔	24-Mar-2025	180 days	12 days	✔



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis				
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA 2511-A-2	E440	12-Mar-2025	23-Mar-2025	180 days	11 days	✓	24-Mar-2025	180 days	12 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA 2511-A-3	E440	12-Mar-2025	23-Mar-2025	180 days	11 days	✓	24-Mar-2025	180 days	12 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA 2511-A-4	E440	12-Mar-2025	23-Mar-2025	180 days	11 days	✓	24-Mar-2025	180 days	12 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA 2511-A-5	E440	12-Mar-2025	23-Mar-2025	180 days	11 days	✓	24-Mar-2025	180 days	12 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA 2511-A-6	E440	12-Mar-2025	23-Mar-2025	180 days	11 days	✓	24-Mar-2025	180 days	12 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA 2511-A-7	E440	12-Mar-2025	23-Mar-2025	180 days	11 days	✓	24-Mar-2025	180 days	12 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA 2511-A-8	E440	12-Mar-2025	23-Mar-2025	180 days	11 days	✓	24-Mar-2025	180 days	12 days	✓	
Metals : Metals in Soil/Solid by CRC ICPMS											
LDPE bag BA 2511-A-9	E440	12-Mar-2025	23-Mar-2025	180 days	11 days	✓	24-Mar-2025	180 days	12 days	✓	
Physical Tests : Moisture Content by Gravimetry											
LDPE bag BA 2511-A-1	E144	12-Mar-2025	----	----	----		22-Mar-2025	----	10 days		



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2511-A-10	E144	12-Mar-2025	----	----	----		22-Mar-2025	----	10 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2511-A-11	E144	12-Mar-2025	----	----	----		22-Mar-2025	----	10 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2511-A-12	E144	12-Mar-2025	----	----	----		22-Mar-2025	----	10 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2511-A-2	E144	12-Mar-2025	----	----	----		22-Mar-2025	----	10 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2511-A-3	E144	12-Mar-2025	----	----	----		22-Mar-2025	----	10 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2511-A-4	E144	12-Mar-2025	----	----	----		22-Mar-2025	----	10 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2511-A-5	E144	12-Mar-2025	----	----	----		22-Mar-2025	----	10 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2511-A-6	E144	12-Mar-2025	----	----	----		22-Mar-2025	----	10 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2511-A-7	E144	12-Mar-2025	----	----	----		22-Mar-2025	----	10 days	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2511-A-8	E144	12-Mar-2025	----	----	----		22-Mar-2025	----	10 days	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2511-A-9	E144	12-Mar-2025	----	----	----		22-Mar-2025	----	10 days	
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2511-A-1	E108	12-Mar-2025	23-Mar-2025	30 days	11 days	✓	24-Mar-2025	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2511-A-10	E108	12-Mar-2025	23-Mar-2025	30 days	11 days	✓	24-Mar-2025	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2511-A-11	E108	12-Mar-2025	23-Mar-2025	30 days	11 days	✓	24-Mar-2025	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2511-A-12	E108	12-Mar-2025	23-Mar-2025	30 days	11 days	✓	24-Mar-2025	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2511-A-2	E108	12-Mar-2025	23-Mar-2025	30 days	11 days	✓	24-Mar-2025	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2511-A-3	E108	12-Mar-2025	23-Mar-2025	30 days	11 days	✓	24-Mar-2025	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2511-A-4	E108	12-Mar-2025	23-Mar-2025	30 days	11 days	✓	24-Mar-2025	30 days	12 days	✓



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2511-A-5	E108	12-Mar-2025	23-Mar-2025	30 days	11 days	✓	24-Mar-2025	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2511-A-6	E108	12-Mar-2025	23-Mar-2025	30 days	11 days	✓	24-Mar-2025	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2511-A-7	E108	12-Mar-2025	23-Mar-2025	30 days	11 days	✓	24-Mar-2025	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2511-A-8	E108	12-Mar-2025	23-Mar-2025	30 days	11 days	✓	24-Mar-2025	30 days	12 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2511-A-9	E108	12-Mar-2025	23-Mar-2025	30 days	11 days	✓	24-Mar-2025	30 days	12 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2511-A-1	E512	21-Mar-2025	23-Mar-2025	37 days	11 days	✓	23-Mar-2025	37 days	11 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2511-A-10	E512	21-Mar-2025	23-Mar-2025	37 days	11 days	✓	23-Mar-2025	37 days	11 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2511-A-11	E512	21-Mar-2025	23-Mar-2025	37 days	11 days	✓	23-Mar-2025	37 days	11 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2511-A-12	E512	21-Mar-2025	23-Mar-2025	37 days	11 days	✓	23-Mar-2025	37 days	11 days	✓



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2511-A-2	E512	21-Mar-2025	23-Mar-2025	37 days	11 days	✓	23-Mar-2025	37 days	11 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2511-A-3	E512	21-Mar-2025	23-Mar-2025	37 days	11 days	✓	23-Mar-2025	37 days	11 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2511-A-4	E512	21-Mar-2025	23-Mar-2025	37 days	11 days	✓	23-Mar-2025	37 days	11 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2511-A-5	E512	21-Mar-2025	23-Mar-2025	37 days	11 days	✓	23-Mar-2025	37 days	11 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2511-A-6	E512	21-Mar-2025	23-Mar-2025	37 days	11 days	✓	23-Mar-2025	37 days	11 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2511-A-7	E512	21-Mar-2025	23-Mar-2025	37 days	11 days	✓	23-Mar-2025	37 days	11 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2511-A-8	E512	21-Mar-2025	23-Mar-2025	37 days	11 days	✓	23-Mar-2025	37 days	11 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2511-A-9	E512	21-Mar-2025	23-Mar-2025	37 days	11 days	✓	23-Mar-2025	37 days	11 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2511-A-1	E444	21-Mar-2025	23-Mar-2025	189 days	11 days	✓	24-Mar-2025	189 days	12 days	✓



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2511-A-10	E444	21-Mar-2025	23-Mar-2025	189 days	11 days	✓	24-Mar-2025	189 days	12 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2511-A-11	E444	21-Mar-2025	23-Mar-2025	189 days	11 days	✓	24-Mar-2025	189 days	12 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2511-A-12	E444	21-Mar-2025	23-Mar-2025	189 days	11 days	✓	24-Mar-2025	189 days	12 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2511-A-2	E444	21-Mar-2025	23-Mar-2025	189 days	11 days	✓	24-Mar-2025	189 days	12 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2511-A-3	E444	21-Mar-2025	23-Mar-2025	189 days	11 days	✓	24-Mar-2025	189 days	12 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2511-A-4	E444	21-Mar-2025	23-Mar-2025	189 days	11 days	✓	24-Mar-2025	189 days	12 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2511-A-5	E444	21-Mar-2025	23-Mar-2025	189 days	11 days	✓	24-Mar-2025	189 days	12 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2511-A-6	E444	21-Mar-2025	23-Mar-2025	189 days	11 days	✓	24-Mar-2025	189 days	12 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2511-A-7	E444	21-Mar-2025	23-Mar-2025	189 days	11 days	✓	24-Mar-2025	189 days	12 days	✓



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2511-A-8	E444	21-Mar-2025	23-Mar-2025	189 days	11 days	✓	24-Mar-2025	189 days	12 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2511-A-9	E444	21-Mar-2025	23-Mar-2025	189 days	11 days	✓	24-Mar-2025	189 days	12 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2511-A-1	EPP444	12-Mar-2025	21-Mar-2025	----	----		----	28 days	9 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2511-A-10	EPP444	12-Mar-2025	21-Mar-2025	----	----		----	28 days	9 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2511-A-11	EPP444	12-Mar-2025	21-Mar-2025	----	----		----	28 days	9 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2511-A-12	EPP444	12-Mar-2025	21-Mar-2025	----	----		----	28 days	9 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2511-A-2	EPP444	12-Mar-2025	21-Mar-2025	----	----		----	28 days	9 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2511-A-3	EPP444	12-Mar-2025	21-Mar-2025	----	----		----	28 days	9 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2511-A-4	EPP444	12-Mar-2025	21-Mar-2025	----	----		----	28 days	9 days	✓



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2511-A-5	EPP444	12-Mar-2025	21-Mar-2025	----	----		----	28 days	9 days	✔
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2511-A-6	EPP444	12-Mar-2025	21-Mar-2025	----	----		----	28 days	9 days	✔
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2511-A-7	EPP444	12-Mar-2025	21-Mar-2025	----	----		----	28 days	9 days	✔
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2511-A-8	EPP444	12-Mar-2025	21-Mar-2025	----	----		----	28 days	9 days	✔
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2511-A-9	EPP444	12-Mar-2025	21-Mar-2025	----	----		----	28 days	9 days	✔

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
Analytical Methods							
Laboratory Duplicates (DUP)							
pH by Meter (1:2 Soil:Water Extraction)	E108	1920380	1	15	6.6	5.0	✔
Moisture Content by Gravimetry	E144	1920383	1	12	8.3	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	1920382	1	14	7.1	5.0	✔
Metals by CRC ICPMS (TCLP)	E444	1920576	1	12	8.3	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	1920381	1	14	7.1	5.0	✔
Mercury by CVAAS (TCLP)	E512	1920575	1	12	8.3	5.0	✔
Laboratory Control Samples (LCS)							
pH by Meter (1:2 Soil:Water Extraction)	E108	1920380	1	15	6.6	5.0	✔
Moisture Content by Gravimetry	E144	1920383	1	12	8.3	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	1920382	2	14	14.2	10.0	✔
Mercury in Soil/Solid by CVAAS	E510	1920381	2	14	14.2	10.0	✔
Method Blanks (MB)							
Moisture Content by Gravimetry	E144	1920383	1	12	8.3	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	1920382	1	14	7.1	5.0	✔
Metals by CRC ICPMS (TCLP)	E444	1920576	1	12	8.3	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	1920381	1	14	7.1	5.0	✔
Mercury by CVAAS (TCLP)	E512	1920575	1	12	8.3	5.0	✔
Matrix Spikes (MS)							
Metals by CRC ICPMS (TCLP)	E444	1920576	1	12	8.3	5.0	✔
Mercury by CVAAS (TCLP)	E512	1920575	1	12	8.3	5.0	✔



Methodology References and Summaries

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. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
pH by Meter (1:2 Soil:Water Extraction)	E108 ALS Environmental - Vancouver	Soil/Solid	BC Lab Manual	pH is determined by potentiometric measurement with a pH electrode at ambient laboratory temperature (normally $20 \pm 5^{\circ}\text{C}$), and is carried out in accordance with procedures described in the BC Lab Manual (prescriptive method). The procedure involves mixing the dried (at $<60^{\circ}\text{C}$) and sieved (10mesh/2mm) sample with ultra pure water at a 1:2 ratio of sediment to water. The pH is then measured by a standard pH probe.
Moisture Content by Gravimetry	E144 ALS Environmental - Vancouver	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C . Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Metals in Soil/Solid by CRC ICPMS	E440 ALS Environmental - Vancouver	Soil/Solid	EPA 6020B (mod)	This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with HNO_3 and HCl . Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines. Analysis is by Collision/Reaction Cell ICPMS.
Metals by CRC ICPMS (TCLP)	E444 ALS Environmental - Vancouver	Soil/Solid	EPA 1311/6020B (mod)	An extract produced by the Toxicity Characteristic Leachate Procedure (TCLP) as per EPA 1311 is analyzed by Collision/Reaction Cell ICPMS.
Mercury in Soil/Solid by CVAAS	E510 ALS Environmental - Vancouver	Soil/Solid	EPA 200.2/1631 Appendix (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO_3 and HCl , followed by CVAAS analysis.
Mercury by CVAAS (TCLP)	E512 ALS Environmental - Vancouver	Soil/Solid	EPA 1311/245.1 (mod)	An extract produced by the Toxicity Characteristic Leachate Procedure (TCLP) as per EPA 1311 is analyzed by CVAAS.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Leach 1:2 Soil:Water for pH/EC	EP108 ALS Environmental - Vancouver	Soil/Solid	BC WLAP METHOD: PH, ELECTROMETRIC, SOIL	The procedure involves mixing the dried (at $<60^{\circ}\text{C}$) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water.

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Work Order : VA25A6050
Client : Veolia Environmental Services Canada
Project : Weekly Bottom Ash



Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Metals and Mercury	EP440 ALS Environmental - Vancouver	Soil/Solid	EPA 200.2 (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO ₃ and HCl. This method is intended to liberate metals that may be environmentally available.
TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)	EPP444 ALS Environmental - Vancouver	Soil/Solid	EPA 1311	Preparation of a Toxicity Characteristic Leaching Procedure (TCLP) solid sample involves particle size reduction, homogenization, then determination of appropriate extraction fluid. A measured portion of fresh subsample is placed in an extraction bottle with the appropriate extraction fluid then tumbled in a rotary extractor for 18+/- 2 hours at 23 +/- 2 C. The liquid leachate is filtered to separate from solids then bottled and prepared for analytical tests.

QUALITY CONTROL REPORT

Work Order	: VA25A6050	Page	: 1 of 12
Client	: Veolia Environmental Services Canada	Laboratory	: ALS Environmental - Vancouver
Contact	: Brian Graham	Account Manager	: Gulraj Dhanaua
Address	: 5150 Riverbend Dr. Burnaby BC Canada V3N 4V3	Address	: 8081 Lougheed Highway Burnaby, British Columbia Canada V5A 1W9
Telephone	: ----	Telephone	: +1 604 253 4188
Project	: Weekly Bottom Ash	Date Samples Received	: 19-Mar-2025 12:10
PO	: ----	Date Analysis Commenced	: 21-Mar-2025
C-O-C number	: ----	Issue Date	: 25-Mar-2025 12:48
Sampler	: ----		
Site	: Metro Van Ash Sampling Program		
Quote number	: VA25-VISI100-001		
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 Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

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
Janice Leung	Supervisor - Organics Instrumentation	Vancouver Organics, Burnaby, British Columbia
Kevin Duarte	Supervisor - Metals ICP Instrumentation	Vancouver Metals, Burnaby, British Columbia



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1920380)											
VA25A6050-001	BA 2511-A-1	pH (1:2 soil:water)	----	E108	0.10	pH units	11.00	11.04	0.4%	5%	----
Physical Tests (QC Lot: 1920383)											
VA25A6050-001	BA 2511-A-1	Moisture	----	E144	0.25	%	25.1	24.0	4.65%	20%	----
Metals (QC Lot: 1920381)											
VA25A6050-001	BA 2511-A-1	Mercury	7439-97-6	E510	0.0500	mg/kg	0.0945	0.0641	0.0304	Diff <2x LOR	----
Metals (QC Lot: 1920382)											
VA25A6050-001	BA 2511-A-1	Aluminum	7429-90-5	E440	50	mg/kg	38300	35500	7.71%	40%	----
		Antimony	7440-36-0	E440	0.10	mg/kg	144	105	31.1%	30%	DUP-H
		Arsenic	7440-38-2	E440	0.10	mg/kg	13.4	16.6	21.2%	30%	----
		Barium	7440-39-3	E440	0.50	mg/kg	633	584	7.92%	40%	----
		Beryllium	7440-41-7	E440	0.10	mg/kg	0.43	0.42	0.006	Diff <2x LOR	----
		Bismuth	7440-69-9	E440	0.20	mg/kg	9.57	7.87	19.6%	30%	----
		Boron	7440-42-8	E440	5.0	mg/kg	192	229	17.8%	30%	----
		Cadmium	7440-43-9	E440	0.020	mg/kg	8.41	5.68	38.7%	30%	DUP-H
		Calcium	7440-70-2	E440	50	mg/kg	130000	132000	1.27%	30%	----
		Chromium	7440-47-3	E440	0.50	mg/kg	144	225	44.0%	30%	DUP-H
		Cobalt	7440-48-4	E440	0.10	mg/kg	53.8	120	76.1%	30%	DUP-H
		Copper	7440-50-8	E440	0.50	mg/kg	2870	3170	10.0%	30%	----
		Iron	7439-89-6	E440	50	mg/kg	74100	59300	22.2%	30%	----
		Lead	7439-92-1	E440	0.50	mg/kg	1620	406	120%	40%	DUP-H
		Lithium	7439-93-2	E440	2.0	mg/kg	34.2	35.2	2.71%	30%	----
		Magnesium	7439-95-4	E440	20	mg/kg	12300	13400	8.51%	30%	----
		Manganese	7439-96-5	E440	1.0	mg/kg	724	778	7.16%	30%	----
		Molybdenum	7439-98-7	E440	0.10	mg/kg	20.0	33.2	49.6%	40%	DUP-H
		Nickel	7440-02-0	E440	0.50	mg/kg	162	308	62.1%	30%	DUP-H
		Phosphorus	7723-14-0	E440	50	mg/kg	8100	10700	27.8%	30%	----
		Potassium	7440-09-7	E440	100	mg/kg	5380	5760	6.80%	40%	----
		Selenium	7782-49-2	E440	0.20	mg/kg	0.31	0.40	0.08	Diff <2x LOR	----
		Silver	7440-22-4	E440	0.10	mg/kg	5.16	5.30	2.76%	40%	----
		Sodium	7440-23-5	E440	50	mg/kg	17500	18800	7.06%	40%	----

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 Work Order : VA25A6050
 Client : Veolia Environmental Services Canada
 Project : Weekly Bottom Ash



Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Metals (QC Lot: 1920382) - continued											
VA25A6050-001	BA 2511-A-1	Strontium	7440-24-6	E440	0.50	mg/kg	272	295	8.26%	40%	----
		Sulfur	7704-34-9	E440	1000	mg/kg	11800	14200	18.8%	30%	----
		Thallium	7440-28-0	E440	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tin	7440-31-5	E440	2.0	mg/kg	125	141	12.1%	40%	----
		Titanium	7440-32-6	E440	1.0	mg/kg	475	276	52.9%	40%	DUP-H
		Tungsten	7440-33-7	E440	0.50	mg/kg	6.59	8.98	30.7%	30%	DUP-H
		Uranium	7440-61-1	E440	0.050	mg/kg	1.38	1.58	13.8%	30%	----
		Vanadium	7440-62-2	E440	0.20	mg/kg	35.6	37.4	4.90%	30%	----
		Zinc	7440-66-6	E440	2.0	mg/kg	3150	3420	8.05%	30%	----
		Zirconium	7440-67-7	E440	1.0	mg/kg	1.8	2.4	0.6	Diff <2x LOR	----
TCLP Metals (QC Lot: 1920575)											
VA25A6050-001	BA 2511-A-1	Mercury, TCLP	7439-97-6	E512	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
TCLP Metals (QC Lot: 1920576)											
VA25A6050-001	BA 2511-A-1	Antimony, TCLP	7440-36-0	E444	1.00	mg/L	<1.00	<1.00	0	Diff <2x LOR	----
		Arsenic, TCLP	7440-38-2	E444	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Barium, TCLP	7440-39-3	E444	2.5	mg/L	<2.5	<2.5	0	Diff <2x LOR	----
		Beryllium, TCLP	7440-41-7	E444	0.025	mg/L	<0.025	<0.025	0	Diff <2x LOR	----
		Boron, TCLP	7440-42-8	E444	0.50	mg/L	2.10	2.08	0.02	Diff <2x LOR	----
		Cadmium, TCLP	7440-43-9	E444	0.050	mg/L	0.057	0.055	0.003	Diff <2x LOR	----
		Calcium, TCLP	7440-70-2	E444	10	mg/L	1940	1860	4.56%	30%	----
		Chromium, TCLP	7440-47-3	E444	0.25	mg/L	<0.25	<0.25	0	Diff <2x LOR	----
		Cobalt, TCLP	7440-48-4	E444	0.050	mg/L	1.65	1.56	5.37%	30%	----
		Copper, TCLP	7440-50-8	E444	0.050	mg/L	0.712	0.669	6.33%	30%	----
		Iron, TCLP	7439-89-6	E444	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Lead, TCLP	7439-92-1	E444	0.25	mg/L	<0.25	<0.25	0	Diff <2x LOR	----
		Magnesium, TCLP	7439-95-4	E444	2.5	mg/L	138	133	3.91%	30%	----
		Nickel, TCLP	7440-02-0	E444	0.25	mg/L	0.34	0.32	0.02	Diff <2x LOR	----
		Selenium, TCLP	7782-49-2	E444	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
		Silver, TCLP	7440-22-4	E444	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Thallium, TCLP	7440-28-0	E444	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Uranium, TCLP	7440-61-1	E444	0.20	mg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Vanadium, TCLP	7440-62-2	E444	0.15	mg/L	<0.15	<0.15	0	Diff <2x LOR	----
		Zinc, TCLP	7440-66-6	E444	0.50	mg/L	7.91	7.53	4.96%	30%	----
		Zirconium, TCLP	7440-67-7	E444	10	mg/L	<10	<10	0	Diff <2x LOR	----



Qualifiers

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1920383)						
Moisture	---	E144	0.25	%	<0.25	---
Metals (QCLot: 1920381)						
Mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	---
Metals (QCLot: 1920382)						
Aluminum	7429-90-5	E440	50	mg/kg	<50	---
Antimony	7440-36-0	E440	0.1	mg/kg	<0.10	---
Arsenic	7440-38-2	E440	0.1	mg/kg	<0.10	---
Barium	7440-39-3	E440	0.5	mg/kg	<0.50	---
Beryllium	7440-41-7	E440	0.1	mg/kg	<0.10	---
Bismuth	7440-69-9	E440	0.2	mg/kg	<0.20	---
Boron	7440-42-8	E440	5	mg/kg	<5.0	---
Cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	---
Calcium	7440-70-2	E440	50	mg/kg	<50	---
Chromium	7440-47-3	E440	0.5	mg/kg	<0.50	---
Cobalt	7440-48-4	E440	0.1	mg/kg	<0.10	---
Copper	7440-50-8	E440	0.5	mg/kg	<0.50	---
Iron	7439-89-6	E440	50	mg/kg	<50	---
Lead	7439-92-1	E440	0.5	mg/kg	<0.50	---
Lithium	7439-93-2	E440	2	mg/kg	<2.0	---
Magnesium	7439-95-4	E440	20	mg/kg	<20	---
Manganese	7439-96-5	E440	1	mg/kg	<1.0	---
Molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	---
Nickel	7440-02-0	E440	0.5	mg/kg	<0.50	---
Phosphorus	7723-14-0	E440	50	mg/kg	<50	---
Potassium	7440-09-7	E440	100	mg/kg	<100	---
Selenium	7782-49-2	E440	0.2	mg/kg	<0.20	---
Silver	7440-22-4	E440	0.1	mg/kg	<0.10	---
Sodium	7440-23-5	E440	50	mg/kg	<50	---
Strontium	7440-24-6	E440	0.5	mg/kg	<0.50	---
Sulfur	7704-34-9	E440	1000	mg/kg	<1000	---
Thallium	7440-28-0	E440	0.05	mg/kg	<0.050	---
Tin	7440-31-5	E440	2	mg/kg	<2.0	---



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Metals (QCLot: 1920382) - continued						
Titanium	7440-32-6	E440	1	mg/kg	<1.0	----
Tungsten	7440-33-7	E440	0.5	mg/kg	<0.50	----
Uranium	7440-61-1	E440	0.05	mg/kg	<0.050	----
Vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	----
Zinc	7440-66-6	E440	2	mg/kg	<2.0	----
Zirconium	7440-67-7	E440	1	mg/kg	<1.0	----
TCLP Metals (QCLot: 1920575)						
Mercury, TCLP	7439-97-6	E512	0.001	mg/L	<0.0010	----
TCLP Metals (QCLot: 1920576)						
Antimony, TCLP	7440-36-0	E444	0.1	mg/L	<0.10	----
Arsenic, TCLP	7440-38-2	E444	1	mg/L	<1.0	----
Barium, TCLP	7440-39-3	E444	2.5	mg/L	<2.5	----
Beryllium, TCLP	7440-41-7	E444	0.025	mg/L	<0.025	----
Boron, TCLP	7440-42-8	E444	0.5	mg/L	<0.50	----
Cadmium, TCLP	7440-43-9	E444	0.05	mg/L	<0.050	----
Calcium, TCLP	7440-70-2	E444	10	mg/L	<10	----
Chromium, TCLP	7440-47-3	E444	0.25	mg/L	<0.25	----
Cobalt, TCLP	7440-48-4	E444	0.05	mg/L	<0.050	----
Copper, TCLP	7440-50-8	E444	0.05	mg/L	<0.050	----
Iron, TCLP	7439-89-6	E444	5	mg/L	<5.0	----
Lead, TCLP	7439-92-1	E444	0.25	mg/L	<0.25	----
Magnesium, TCLP	7439-95-4	E444	2.5	mg/L	<2.5	----
Nickel, TCLP	7440-02-0	E444	0.25	mg/L	<0.25	----
Selenium, TCLP	7782-49-2	E444	0.1	mg/L	<0.10	----
Silver, TCLP	7440-22-4	E444	0.05	mg/L	<0.050	----
Thallium, TCLP	7440-28-0	E444	1	mg/L	<1.0	----
Uranium, TCLP	7440-61-1	E444	0.2	mg/L	<0.20	----
Vanadium, TCLP	7440-62-2	E444	0.15	mg/L	<0.15	----
Zinc, TCLP	7440-66-6	E444	0.5	mg/L	<0.50	----
Zirconium, TCLP	7440-67-7	E444	10	mg/L	<10	----



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1920380)									
pH (1:2 soil:water)	----	E108	----	pH units	6 pH units	100	95.0	105	----
Physical Tests (QCLot: 1920383)									
Moisture	----	E144	0.25	%	50 %	101	90.0	110	----
Metals (QCLot: 1920381)									
Mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	102	80.0	120	----
Metals (QCLot: 1920382)									
Aluminum	7429-90-5	E440	50	mg/kg	200 mg/kg	99.2	80.0	120	----
Antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	103	80.0	120	----
Arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	101	80.0	120	----
Barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	97.8	80.0	120	----
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	104	80.0	120	----
Bismuth	7440-69-9	E440	0.2	mg/kg	100 mg/kg	94.1	80.0	120	----
Boron	7440-42-8	E440	5	mg/kg	100 mg/kg	100	80.0	120	----
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	95.0	80.0	120	----
Calcium	7440-70-2	E440	50	mg/kg	5000 mg/kg	99.7	80.0	120	----
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	96.3	80.0	120	----
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	94.0	80.0	120	----
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	92.4	80.0	120	----
Iron	7439-89-6	E440	50	mg/kg	100 mg/kg	101	80.0	120	----
Lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	98.0	80.0	120	----
Lithium	7439-93-2	E440	2	mg/kg	25 mg/kg	105	80.0	120	----
Magnesium	7439-95-4	E440	20	mg/kg	5000 mg/kg	98.4	80.0	120	----
Manganese	7439-96-5	E440	1	mg/kg	25 mg/kg	95.6	80.0	120	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	102	80.0	120	----
Nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	92.0	80.0	120	----
Phosphorus	7723-14-0	E440	50	mg/kg	1000 mg/kg	103	80.0	120	----
Potassium	7440-09-7	E440	100	mg/kg	5000 mg/kg	98.6	80.0	120	----
Selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	98.9	80.0	120	----
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	92.6	80.0	120	----
Sodium	7440-23-5	E440	50	mg/kg	5000 mg/kg	94.1	80.0	120	----
Strontium	7440-24-6	E440	0.5	mg/kg	25 mg/kg	104	80.0	120	----
Sulfur	7704-34-9	E440	1000	mg/kg	5000 mg/kg	97.6	80.0	120	----



Sub-Matrix: Soil/Solid					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Metals (QCLot: 1920382) - continued									
Thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	96.6	80.0	120	----
Tin	7440-31-5	E440	2	mg/kg	50 mg/kg	95.7	80.0	120	----
Titanium	7440-32-6	E440	1	mg/kg	25 mg/kg	94.0	80.0	120	----
Tungsten	7440-33-7	E440	0.5	mg/kg	10 mg/kg	98.8	80.0	120	----
Uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	101	80.0	120	----
Vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	94.9	80.0	120	----
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	91.6	80.0	120	----
Zirconium	7440-67-7	E440	1	mg/kg	10 mg/kg	96.7	80.0	120	----



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
TCLP Metals (QCLot: 1920575)										
VA25A6050-001	BA 2511-A-1	Mercury, TCLP	7439-97-6	E512	0.00095 mg/L	0.001 mg/L	94.9	50.0	140	----
TCLP Metals (QCLot: 1920576)										
VA25A6050-001	BA 2511-A-1	Antimony, TCLP	7440-36-0	E444	5.16 mg/L	5 mg/L	103	50.0	140	----
		Arsenic, TCLP	7440-38-2	E444	5.1 mg/L	5 mg/L	103	50.0	140	----
		Barium, TCLP	7440-39-3	E444	2.8 mg/L	12.5 mg/L	22.7	50.0	140	RRQC
		Beryllium, TCLP	7440-41-7	E444	0.247 mg/L	0.25 mg/L	98.9	50.0	140	----
		Boron, TCLP	7440-42-8	E444	8.95 mg/L	10 mg/L	89.5	50.0	140	----
		Cadmium, TCLP	7440-43-9	E444	0.239 mg/L	0.25 mg/L	95.7	50.0	140	----
		Calcium, TCLP	7440-70-2	E444	ND mg/L	----	ND	50.0	140	----
		Chromium, TCLP	7440-47-3	E444	1.25 mg/L	1.25 mg/L	99.7	50.0	140	----
		Cobalt, TCLP	7440-48-4	E444	ND mg/L	----	ND	50.0	140	----
		Copper, TCLP	7440-50-8	E444	2.27 mg/L	2.5 mg/L	90.9	50.0	140	----
		Iron, TCLP	7439-89-6	E444	247 mg/L	250 mg/L	98.7	50.0	140	----
		Lead, TCLP	7439-92-1	E444	7.07 mg/L	10 mg/L	70.7	50.0	140	----
		Magnesium, TCLP	7439-95-4	E444	230 mg/L	250 mg/L	91.9	50.0	140	----
		Nickel, TCLP	7440-02-0	E444	2.34 mg/L	2.5 mg/L	93.6	50.0	140	----
		Selenium, TCLP	7782-49-2	E444	4.94 mg/L	5 mg/L	98.8	50.0	140	----
		Silver, TCLP	7440-22-4	E444	0.084 mg/L	0.1 mg/L	83.7	50.0	140	----
		Thallium, TCLP	7440-28-0	E444	4.8 mg/L	5 mg/L	95.9	50.0	140	----
		Uranium, TCLP	7440-61-1	E444	4.88 mg/L	5 mg/L	97.5	50.0	150	----
		Vanadium, TCLP	7440-62-2	E444	0.73 mg/L	0.75 mg/L	97.2	50.0	140	----
		Zinc, TCLP	7440-66-6	E444	9.23 mg/L	10 mg/L	92.3	50.0	140	----
		Zirconium, TCLP	7440-67-7	E444	0.8 mg/L	1 mg/L	78.2	50.0	150	----

Qualifiers

Qualifier	Description
RRQC	Refer to report comments for information regarding this QC result.



Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:

Sub-Matrix:					Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method			Low	High	
Metals (QCLot: 1920381)									
QC-1920381-003	MRCA-21	Mercury	7439-97-6	E510	0.068 mg/kg	98.6	70.0	130	----
Metals (QCLot: 1920382)									
QC-1920382-003	MRCA-21	Aluminum	7429-90-5	E440	22500 mg/kg	104	70.0	130	----
QC-1920382-003	MRCA-21	Antimony	7440-36-0	E440	24.8 mg/kg	99.2	70.0	130	----
QC-1920382-003	MRCA-21	Arsenic	7440-38-2	E440	21.2 mg/kg	97.6	70.0	130	----
QC-1920382-003	MRCA-21	Barium	7440-39-3	E440	788 mg/kg	96.2	70.0	130	----
QC-1920382-003	MRCA-21	Beryllium	7440-41-7	E440	1.82 mg/kg	113	70.0	130	----
QC-1920382-003	MRCA-21	Bismuth	7440-69-9	E440	1.78 mg/kg	93.4	70.0	130	----
QC-1920382-003	MRCA-21	Cadmium	7440-43-9	E440	2.15 mg/kg	96.7	70.0	130	----
QC-1920382-003	MRCA-21	Calcium	7440-70-2	E440	4900 mg/kg	107	70.0	130	----
QC-1920382-003	MRCA-21	Chromium	7440-47-3	E440	56.9 mg/kg	98.2	70.0	130	----
QC-1920382-003	MRCA-21	Cobalt	7440-48-4	E440	32 mg/kg	94.8	70.0	130	----
QC-1920382-003	MRCA-21	Copper	7440-50-8	E440	969 mg/kg	92.9	70.0	130	----
QC-1920382-003	MRCA-21	Iron	7439-89-6	E440	32700 mg/kg	101	70.0	130	----
QC-1920382-003	MRCA-21	Lead	7439-92-1	E440	919 mg/kg	96.1	70.0	130	----
QC-1920382-003	MRCA-21	Lithium	7439-93-2	E440	47.3 mg/kg	115	70.0	130	----
QC-1920382-003	MRCA-21	Magnesium	7439-95-4	E440	7780 mg/kg	98.7	70.0	130	----
QC-1920382-003	MRCA-21	Manganese	7439-96-5	E440	8640 mg/kg	94.7	70.0	130	----
QC-1920382-003	MRCA-21	Molybdenum	7439-98-7	E440	25.1 mg/kg	103	70.0	130	----
QC-1920382-003	MRCA-21	Nickel	7440-02-0	E440	1000 mg/kg	93.0	70.0	130	----
QC-1920382-003	MRCA-21	Phosphorus	7723-14-0	E440	660 mg/kg	101	70.0	130	----
QC-1920382-003	MRCA-21	Potassium	7440-09-7	E440	10800 mg/kg	97.2	70.0	130	----
QC-1920382-003	MRCA-21	Selenium	7782-49-2	E440	1.04 mg/kg	101	60.0	140	----
QC-1920382-003	MRCA-21	Silver	7440-22-4	E440	8.98 mg/kg	98.8	70.0	130	----
QC-1920382-003	MRCA-21	Sodium	7440-23-5	E440	1770 mg/kg	109	70.0	130	----
QC-1920382-003	MRCA-21	Strontium	7440-24-6	E440	41 mg/kg	106	70.0	130	----
QC-1920382-003	MRCA-21	Sulfur	7704-34-9	E440	3940 mg/kg	72.4	50.0	150	----
QC-1920382-003	MRCA-21	Thallium	7440-28-0	E440	0.907 mg/kg	97.3	70.0	130	----
QC-1920382-003	MRCA-21	Tin	7440-31-5	E440	3.79 mg/kg	94.6	40.0	160	----
QC-1920382-003	MRCA-21	Titanium	7440-32-6	E440	2790 mg/kg	99.9	70.0	130	----
QC-1920382-003	MRCA-21	Tungsten	7440-33-7	E440	6.99 mg/kg	120	70.0	130	----
QC-1920382-003	MRCA-21	Uranium	7440-61-1	E440	3.97 mg/kg	97.5	70.0	130	----
QC-1920382-003	MRCA-21	Vanadium	7440-62-2	E440	66.2 mg/kg	94.0	70.0	130	----



Sub-Matrix:					Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method			Low	High	
Metals (QCLot: 1920382) - continued									
QC-1920382-003	MRCA-21	Zinc	7440-66-6	E440	828 mg/kg	93.7	70.0	130	----
QC-1920382-003	MRCA-21	Zirconium	7440-67-7	E440	6.91 mg/kg	100	70.0	130	----

Report To		Report Format / Distribution		Service Requested (Rush for routine analysis subject to availability)													
Company: Veolia Canada / Burnaby Waste To Energy Facility		"Veolia Email Distribution List" please															
Contact: Brian Graham / Karen Thornquist																	
Address: 5150 Riverbend Drive		Email 1: brian.graham@veolia.com															
Burnaby BC		Email 2: lorenzo.liao@veolia.com															
Phone: 604-521-1025 Fax:		Email 3: karen.thornquist@veolia.com		Analysis Request													
		brent.kirkpatrick@metrovanvancouver.org															
		Sarah.Wellman@metrovanvancouver.org															
Invoice To Same as Report ? Veolia Water Canada		Client / Project Information		Please indicate below Filtered, Preserved or both (F, P, F/P)													
Hardcopy of Invoice with Report?		Job #:															
Company: Veolia Water Canada / Burnaby Waste To Energy		PO / AFE: PO# Veolia to be determined / Weekly Bottom Ash - S															
Contact: Danny George, Purchaser		LSD: (includes 2:1 pH)															
Address: 5150 Riverbend Drive, Burnaby BC V3N 4V3																	
Phone: 604 521 1025 x207 Fax:		Quote #:															
Lab Work Order # A6050 (lab use only)		ALS Contact:		Sampler:													
Sample #	Sample Identification (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	MET-TCLP-VA (all metals, Hg)	MOISTURE	Chrome 6	MET-CSR-FULL-VA (all metals)									Number of Containers
	BA 2511-A-1	12-Mar-25	9:00	Soil	X	X		X									1
	BA 2511-A-2	12-Mar-25	9:00	Soil	X	X		X									1
	BA 2511-A-3	12-Mar-25	9:00	Soil	X	X		X									1
	BA 2511-A-4	12-Mar-25	9:00	Soil	X	X		X									1
	BA 2511-A-5	12-Mar-25	9:00	Soil	X	X		X									1
	BA 2511-A-6	12-Mar-25	9:00	Soil	X	X		X									1
	BA 2511-A-7	12-Mar-25	9:00	Soil	X	X		X									1
	BA 2511-A-8	12-Mar-25	9:00	Soil	X	X		X									1
	BA 2511-A-9	12-Mar-25	9:00	Soil	X	X		X									1
	BA 2511-A-10	12-Mar-25	9:00	Soil	X	X		X									1
	BA 2511-A-11	12-Mar-25	9:00	Soil	X	X		X									1
	BA 2511-A-12	12-Mar-25	9:00	Soil	X	X		X									1

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SHIPMENT RECEPTION (lab use only) Released by: <i>K Thornquist</i> Date (dd-mm-yy): March 18/2025 Time (hh-mm): 8:00 Received by: <i>[Signature]</i> Date: Rcvd 19Mar2025 Time: 12:40pm Temperature: 17 °C SHIPMENT VERIFICATION (lab use only) Verified by: _____ Date: _____ Time: _____ Observations: Yes / No ? If Yes add SIF																	
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