metrovancouver

Bottom Ash Data

2025 Week 36

The following analytical report represents bottom ash composite results for week 36 of 2025 (August 31, 2025 to September 6, 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	:	**VA25C3240**			
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	:	----	E-mail	:	Gulraj.Dhanaua@alsglobal.com
Project	:	Veolia Weekly Bottom Ash-Suite	Telephone	:	+1 604 253 4188
PO	:	1000497676	Date Samples Received	:	08-Sep-2025 11:45
C-O-C number	:	----	Date Analysis Commenced	:	12-Sep-2025
Sampler	:	----	Issue Date	:	15-Sep-2025 14:30
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 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*
Kim Jensen		Metals, Burnaby, British Columbia
Ophelia Chiu		Organics, Burnaby, British Columbia
Robin Weeks		Metals, Burnaby, British Columbia

General Comments

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

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

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

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

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

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

<: less than.
>: greater than.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BA 2536-A-1 UNPROCESSED ----	BA 2536-A-2 UNPROCESSED ----	BA 2536-A-3 UNPROCESSED ----	BA 2536-A-4 UNPROCESSED ----	BA 2536-A-5 UNPROCESSED ----
					Client sampling date / time	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00
						VA25C3240-001	VA25C3240-002	VA25C3240-003	VA25C3240-004	VA25C3240-005
						Result	Result	Result	Result	Result
Physical Tests										
Moisture	----	E144/VA	0.25	%		28.2	28.3	28.3	26.8	25.8
pH (1:2 soil:water)	----	E108/VA	0.10	pH units		10.30	10.44	10.39	10.39	10.79
Metals										
Aluminum	7429-90-5	E440/VA	50	mg/kg		56500	35700	44900	45400	44400
Antimony	7440-36-0	E440/VA	0.10	mg/kg		86.4	111	98.8	106	70.5
Arsenic	7440-38-2	E440/VA	0.10	mg/kg		15.6	14.4	17.0	15.5	14.2
Barium	7440-39-3	E440/VA	0.50	mg/kg		538	575	601	636	577
Beryllium	7440-41-7	E440/VA	0.10	mg/kg		0.37	0.39	0.40	0.38	0.32
Bismuth	7440-69-9	E440/VA	0.20	mg/kg		8.91	9.90	17.0	9.15	47.5
Boron	7440-42-8	E440/VA	5.0	mg/kg		204	221	210	216	168
Cadmium	7440-43-9	E440/VA	0.020	mg/kg		7.80	7.48	7.93	11.9	5.09
Calcium	7440-70-2	E440/VA	50	mg/kg		115000	130000	133000	147000	128000
Chromium	7440-47-3	E440/VA	0.50	mg/kg		183	129	223	161	180
Cobalt	7440-48-4	E440/VA	0.10	mg/kg		247	142	63.4	386	144
Copper	7440-50-8	E440/VA	0.50	mg/kg		1760	2590	4300	7090	5070
Iron	7439-89-6	E440/VA	50	mg/kg		42900	33300	50300	43400	43600
Lead	7439-92-1	E440/VA	0.50	mg/kg		248	284	236	230	211
Lithium	7439-93-2	E440/VA	2.0	mg/kg		33.7	156	37.5	46.0	28.2
Magnesium	7439-95-4	E440/VA	20	mg/kg		11300	12300	12300	11800	11000
Manganese	7439-96-5	E440/VA	1.0	mg/kg		833	978	836	777	925
Mercury	7439-97-6	E510/VA	0.0500	mg/kg		<0.0500	<0.0500	0.142	<0.0500	<0.0500

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BA 2536-A-1 UNPROCESSED ----	BA 2536-A-2 UNPROCESSED ----	BA 2536-A-3 UNPROCESSED ----	BA 2536-A-4 UNPROCESSED ----	BA 2536-A-5 UNPROCESSED ----
					Client sampling date / time	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00
						VA25C3240-001	VA25C3240-002	VA25C3240-003	VA25C3240-004	VA25C3240-005
						Result	Result	Result	Result	Result
Metals										
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg		25.4	24.0	29.0	31.6	31.5
Nickel	7440-02-0	E440/VA	0.50	mg/kg		125	208	190	356	172
Phosphorus	7723-14-0	E440/VA	50	mg/kg		12000	9850	11500	12800	11100
Potassium	7440-09-7	E440/VA	100	mg/kg		6340	6730	7210	6290	5330
Selenium	7782-49-2	E440/VA	0.20	mg/kg		0.37	0.32	0.34	0.32	0.34
Silver	7440-22-4	E440/VA	0.10	mg/kg		6.99	4.05	5.66	6.16	7.20
Sodium	7440-23-5	E440/VA	50	mg/kg		16300	19000	18000	17800	15000
Strontium	7440-24-6	E440/VA	0.50	mg/kg		280	282	310	314	296
Sulfur	7704-34-9	E440/VA	1000	mg/kg		11400	11700	14200	12800	10000
Thallium	7440-28-0	E440/VA	0.050	mg/kg		0.090	<0.050	<0.050	<0.050	<0.050
Tin	7440-31-5	E440/VA	2.0	mg/kg		201	167	82.3	93.9	141
Titanium	7440-32-6	E440/VA	1.0	mg/kg		1480	378	441	413	297
Tungsten	7440-33-7	E440/VA	0.50	mg/kg		9.60	7.38	7.31	12.1	7.25
Uranium	7440-61-1	E440/VA	0.050	mg/kg		1.51	1.69	1.81	1.68	1.44
Vanadium	7440-62-2	E440/VA	0.20	mg/kg		46.3	46.5	60.0	443	41.9
Zinc	7440-66-6	E440/VA	2.0	mg/kg		10900	10100	2710	3180	1960
Zirconium	7440-67-7	E440/VA	1.0	mg/kg		4.5	1.4	2.4	1.2	2.1
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units		11.40	11.44	11.48	11.50	11.67
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units		2.80	2.46	4.12	3.88	4.43
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units		4.88	4.88	4.88	4.88	4.88

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BA 2536-A-1 UNPROCESSED ----	BA 2536-A-2 UNPROCESSED ----	BA 2536-A-3 UNPROCESSED ----	BA 2536-A-4 UNPROCESSED ----	BA 2536-A-5 UNPROCESSED ----
					Client sampling date / time	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00
						VA25C3240-001	VA25C3240-002	VA25C3240-003	VA25C3240-004	VA25C3240-005
						Result	Result	Result	Result	Result
TCLP Metals										
pH, TCLP final	----	EPP444/VA	0.010	pH units		9.30	9.93	9.59	9.49	9.50
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		0.81	0.85	0.84	0.82	0.98
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L		902	964	941	936	879
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		<0.050	<0.050	<0.050	<0.050	<0.050
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L		0.654	0.698	0.725	0.652	0.656
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	<0.25
Magnesium, TCLP	7439-95-4	E444/VA	2.5	mg/L		7.2	3.1	6.2	6.0	5.4
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		<0.25	<0.25	<0.25	<0.25	<0.25
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)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BA 2536-A-1 UNPROCESSED ----	BA 2536-A-2 UNPROCESSED ----	BA 2536-A-3 UNPROCESSED ----	BA 2536-A-4 UNPROCESSED ----	BA 2536-A-5 UNPROCESSED ----
					Client sampling date / time	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00
						VA25C3240-001	VA25C3240-002	VA25C3240-003	VA25C3240-004	VA25C3240-005
						Result	Result	Result	Result	Result
TCLP Metals										
Zinc, TCLP	7440-66-6	E444/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
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 qualifiers detected.

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BA 2536-A-6 UNPROCESSED ----	BA 2536-A-7 UNPROCESSED ----	BA 2536-A-8 UNPROCESSED ----	BA 2536-A-9 UNPROCESSED ----	BA 2536-A-10 UNPROCESSED ----
					Client sampling date / time	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00
						VA25C3240-006	VA25C3240-007	VA25C3240-008	VA25C3240-009	VA25C3240-010
						Result	Result	Result	Result	Result
Physical Tests										
Moisture	----	E144/VA	0.25	%		26.9	26.6	24.5	27.8	25.3
pH (1:2 soil:water)	----	E108/VA	0.10	pH units		10.67	11.41	10.67	10.56	10.59
Metals										
Aluminum	7429-90-5	E440/VA	50	mg/kg		43800	40700	41900	37000	33700
Antimony	7440-36-0	E440/VA	0.10	mg/kg		91.9	192	102	80.9	290
Arsenic	7440-38-2	E440/VA	0.10	mg/kg		14.7	16.9	21.8	14.6	15.4
Barium	7440-39-3	E440/VA	0.50	mg/kg		674	552	524	578	600
Beryllium	7440-41-7	E440/VA	0.10	mg/kg		0.41	0.35	0.44	0.36	0.45
Bismuth	7440-69-9	E440/VA	0.20	mg/kg		11.7	22.8	6.87	6.57	6.89
Boron	7440-42-8	E440/VA	5.0	mg/kg		197	184	150	164	183
Cadmium	7440-43-9	E440/VA	0.020	mg/kg		7.43	7.12	7.70	5.48	5.94
Calcium	7440-70-2	E440/VA	50	mg/kg		132000	126000	134000	115000	130000

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BA 2536-A-6 UNPROCESSED ----	BA 2536-A-7 UNPROCESSED ----	BA 2536-A-8 UNPROCESSED ----	BA 2536-A-9 UNPROCESSED ----	BA 2536-A-10 UNPROCESSED ----
					Client sampling date / time	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00
						VA25C3240-006	VA25C3240-007	VA25C3240-008	VA25C3240-009	VA25C3240-010
						Result	Result	Result	Result	Result
Metals										
Chromium	7440-47-3	E440/VA	0.50	mg/kg		169	184	160	147	168
Cobalt	7440-48-4	E440/VA	0.10	mg/kg		25.0	111	127	36.8	113
Copper	7440-50-8	E440/VA	0.50	mg/kg		6850	3270	1080	21800	1860
Iron	7439-89-6	E440/VA	50	mg/kg		46900	53200	39200	63800	53800
Lead	7439-92-1	E440/VA	0.50	mg/kg		362	210	266	260	1630
Lithium	7439-93-2	E440/VA	2.0	mg/kg		30.1	33.0	32.6	23.3	36.9
Magnesium	7439-95-4	E440/VA	20	mg/kg		12600	11000	12600	10100	11500
Manganese	7439-96-5	E440/VA	1.0	mg/kg		3140	705	875	678	577
Mercury	7439-97-6	E510/VA	0.0500	mg/kg		<0.0500	<0.0500	0.0618	<0.0500	0.0866
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg		28.7	28.4	35.3	73.1	28.8
Nickel	7440-02-0	E440/VA	0.50	mg/kg		127	238	117	109	113
Phosphorus	7723-14-0	E440/VA	50	mg/kg		10300	11500	10600	10400	12900
Potassium	7440-09-7	E440/VA	100	mg/kg		6000	5740	6700	5290	6140
Selenium	7782-49-2	E440/VA	0.20	mg/kg		0.32	0.29	0.29	0.25	0.53
Silver	7440-22-4	E440/VA	0.10	mg/kg		9.78	4.27	4.10	4.42	9.98
Sodium	7440-23-5	E440/VA	50	mg/kg		16000	15600	16700	15400	16100
Strontium	7440-24-6	E440/VA	0.50	mg/kg		312	250	300	264	580
Sulfur	7704-34-9	E440/VA	1000	mg/kg		10900	10000	11400	8800	10400
Thallium	7440-28-0	E440/VA	0.050	mg/kg		<0.050	<0.050	0.089	<0.050	<0.050
Tin	7440-31-5	E440/VA	2.0	mg/kg		110	1290	93.0	167	105
Titanium	7440-32-6	E440/VA	1.0	mg/kg		470	306	359	220	273

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BA 2536-A-6 UNPROCESSED ----	BA 2536-A-7 UNPROCESSED ----	BA 2536-A-8 UNPROCESSED ----	BA 2536-A-9 UNPROCESSED ----	BA 2536-A-10 UNPROCESSED ----
					Client sampling date / time	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00
						VA25C3240-006	VA25C3240-007	VA25C3240-008	VA25C3240-009	VA25C3240-010
						Result	Result	Result	Result	Result
Metals										
Tungsten	7440-33-7	E440/VA	0.50	mg/kg		7.23	7.77	8.07	11.1	7.96
Uranium	7440-61-1	E440/VA	0.050	mg/kg		1.65	1.52	2.16	1.49	1.53
Vanadium	7440-62-2	E440/VA	0.20	mg/kg		48.4	43.0	48.7	305	44.5
Zinc	7440-66-6	E440/VA	2.0	mg/kg		3890	2570	2610	2370	2460
Zirconium	7440-67-7	E440/VA	1.0	mg/kg		2.1	2.3	2.1	2.2	2.3
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units		11.69	11.64	11.65	11.62	11.67
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units		3.92	2.67	3.13	3.91	4.82
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units		4.88	4.88	4.88	4.88	4.88
pH, TCLP final	----	EPP444/VA	0.010	pH units		9.48	9.51	10.09	9.73	9.56
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		1.43	0.82	0.80	0.77	0.83
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L		870	851	842	798	856
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		<0.050	<0.050	<0.050	<0.050	<0.050
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L		0.670	0.648	0.722	0.799	0.720
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)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BA 2536-A-6 UNPROCESSED ----	BA 2536-A-7 UNPROCESSED ----	BA 2536-A-8 UNPROCESSED ----	BA 2536-A-9 UNPROCESSED ----	BA 2536-A-10 UNPROCESSED ----
					Client sampling date / time	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00	07-Sep-2025 09:00
						VA25C3240-006	VA25C3240-007	VA25C3240-008	VA25C3240-009	VA25C3240-010
						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		6.7	6.4	<2.5	2.5	4.0
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		<0.25	<0.25	<0.25	<0.25	<0.25
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	0.22	<0.15	<0.15	<0.15
Zinc, TCLP	7440-66-6	E444/VA	0.50	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50
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 qualifiers detected.

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BA 2536-A-11 UNPROCESSED ----	BA 2536-A-12 UNPROCESSED ----	----	----	----
					Client sampling date / time	07-Sep-2025 09:00	07-Sep-2025 09:00	----	----	----
						VA25C3240-011	VA25C3240-012	----	----	----
						Result	Result	----	----	----
Physical Tests										
Moisture	----	E144/VA	0.25	%		27.8	27.6	----	----	----
pH (1:2 soil:water)	----	E108/VA	0.10	pH units		10.69	10.69	----	----	----

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BA 2536-A-11 UNPROCESSED ----	BA 2536-A-12 UNPROCESSED ----	----	----	----
					Client sampling date / time	07-Sep-2025 09:00	07-Sep-2025 09:00	----	----	----
						VA25C3240-011	VA25C3240-012	----	----	----
						Result	Result	----	----	----
Metals										
Aluminum	7429-90-5	E440/VA	50	mg/kg		42000	57700	----	----	----
Antimony	7440-36-0	E440/VA	0.10	mg/kg		110	95.9	----	----	----
Arsenic	7440-38-2	E440/VA	0.10	mg/kg		14.0	15.4	----	----	----
Barium	7440-39-3	E440/VA	0.50	mg/kg		682	730	----	----	----
Beryllium	7440-41-7	E440/VA	0.10	mg/kg		0.38	0.37	----	----	----
Bismuth	7440-69-9	E440/VA	0.20	mg/kg		7.96	7.55	----	----	----
Boron	7440-42-8	E440/VA	5.0	mg/kg		158	164	----	----	----
Cadmium	7440-43-9	E440/VA	0.020	mg/kg		6.72	5.99	----	----	----
Calcium	7440-70-2	E440/VA	50	mg/kg		135000	138000	----	----	----
Chromium	7440-47-3	E440/VA	0.50	mg/kg		118	143	----	----	----
Cobalt	7440-48-4	E440/VA	0.10	mg/kg		162	139	----	----	----
Copper	7440-50-8	E440/VA	0.50	mg/kg		2290	7000	----	----	----
Iron	7439-89-6	E440/VA	50	mg/kg		47700	46700	----	----	----
Lead	7439-92-1	E440/VA	0.50	mg/kg		220	373	----	----	----
Lithium	7439-93-2	E440/VA	2.0	mg/kg		33.0	37.9	----	----	----
Magnesium	7439-95-4	E440/VA	20	mg/kg		11500	11600	----	----	----
Manganese	7439-96-5	E440/VA	1.0	mg/kg		784	893	----	----	----
Mercury	7439-97-6	E510/VA	0.0500	mg/kg		<0.0500	<0.0500	----	----	----
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg		29.2	34.7	----	----	----
Nickel	7440-02-0	E440/VA	0.50	mg/kg		169	199	----	----	----
Phosphorus	7723-14-0	E440/VA	50	mg/kg		12300	12500	----	----	----

Analytical Results

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

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BA 2536-A-11 UNPROCESSED ----	BA 2536-A-12 UNPROCESSED ----	----	----	----
					Client sampling date / time	07-Sep-2025 09:00	07-Sep-2025 09:00	----	----	----
						VA25C3240-011	VA25C3240-012	----	----	----
						Result	Result	----	----	----
Metals										
Potassium	7440-09-7	E440/VA	100	mg/kg		5980	6100	----	----	----
Selenium	7782-49-2	E440/VA	0.20	mg/kg		0.37	0.33	----	----	----
Silver	7440-22-4	E440/VA	0.10	mg/kg		4.46	11.4	----	----	----
Sodium	7440-23-5	E440/VA	50	mg/kg		16400	16700	----	----	----
Strontium	7440-24-6	E440/VA	0.50	mg/kg		283	284	----	----	----
Sulfur	7704-34-9	E440/VA	1000	mg/kg		10300	11000	----	----	----
Thallium	7440-28-0	E440/VA	0.050	mg/kg		<0.050	<0.050	----	----	----
Tin	7440-31-5	E440/VA	2.0	mg/kg		90.8	100	----	----	----
Titanium	7440-32-6	E440/VA	1.0	mg/kg		444	594	----	----	----
Tungsten	7440-33-7	E440/VA	0.50	mg/kg		8.59	25.5	----	----	----
Uranium	7440-61-1	E440/VA	0.050	mg/kg		1.62	1.76	----	----	----
Vanadium	7440-62-2	E440/VA	0.20	mg/kg		56.8	47.7	----	----	----
Zinc	7440-66-6	E440/VA	2.0	mg/kg		3360	2640	----	----	----
Zirconium	7440-67-7	E440/VA	1.0	mg/kg		1.5	2.5	----	----	----
TCLP Metals										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units		11.69	11.64	----	----	----
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units		4.23	3.39	----	----	----
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units		4.88	4.88	----	----	----
pH, TCLP final	----	EPP444/VA	0.010	pH units		10.06	9.88	----	----	----
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)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	BA 2536-A-11 UNPROCESSED ----	BA 2536-A-12 UNPROCESSED ----	----	----	----
					Client sampling date / time	07-Sep-2025 09:00	07-Sep-2025 09:00	----	----	----
						VA25C3240-011	VA25C3240-012	----	----	----
						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		0.82	0.81	----	----	----
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L		821	820	----	----	----
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		<0.050	<0.050	----	----	----
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L		0.808	0.842	----	----	----
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		<2.5	2.9	----	----	----
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		<0.25	<0.25	----	----	----
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		<0.50	<0.50	----	----	----
Zirconium, TCLP	7440-67-7	E444/VA	10	mg/L		<10	<10	----	----	----

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

ALS Canada Ltd.

right solutions.
right partner.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **VA25C3240**	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	: Veolia Weekly Bottom Ash-Suite	Date Samples Received	: 08-Sep-2025 11:45
PO	: 1000497676	Issue Date	: 15-Sep-2025 14:29
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
- No Matrix Spike outliers occur.
- Duplicate 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	Anonymous	Anonymous	Magnesium	7439-95-4	E440	31.2 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	Phosphorus	7723-14-0	E440	52.2 % 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.*

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 Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2536-A-1 UNPROCESSED	E510	07-Sep-2025	14-Sep-2025	28 days	7 days	✓	15-Sep-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2536-A-10 UNPROCESSED	E510	07-Sep-2025	14-Sep-2025	28 days	7 days	✓	15-Sep-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2536-A-11 UNPROCESSED	E510	07-Sep-2025	14-Sep-2025	28 days	7 days	✓	15-Sep-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2536-A-12 UNPROCESSED	E510	07-Sep-2025	14-Sep-2025	28 days	7 days	✓	15-Sep-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2536-A-2 UNPROCESSED	E510	07-Sep-2025	14-Sep-2025	28 days	7 days	✓	15-Sep-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2536-A-3 UNPROCESSED	E510	07-Sep-2025	14-Sep-2025	28 days	7 days	✓	15-Sep-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2536-A-4 UNPROCESSED	E510	07-Sep-2025	14-Sep-2025	28 days	7 days	✓	15-Sep-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 Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2536-A-5 UNPROCESSED	E510	07-Sep-2025	14-Sep-2025	28 days	7 days	✓	15-Sep-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2536-A-6 UNPROCESSED	E510	07-Sep-2025	14-Sep-2025	28 days	7 days	✓	15-Sep-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2536-A-7 UNPROCESSED	E510	07-Sep-2025	14-Sep-2025	28 days	7 days	✓	15-Sep-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2536-A-8 UNPROCESSED	E510	07-Sep-2025	14-Sep-2025	28 days	7 days	✓	15-Sep-2025	28 days	1 days	✓
Metals : Mercury in Soil/Solid by CVAAS										
LDPE bag BA 2536-A-9 UNPROCESSED	E510	07-Sep-2025	14-Sep-2025	28 days	7 days	✓	15-Sep-2025	28 days	1 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2536-A-1 UNPROCESSED	E440	07-Sep-2025	14-Sep-2025	180 days	7 days	✓	15-Sep-2025	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2536-A-10 UNPROCESSED	E440	07-Sep-2025	14-Sep-2025	180 days	7 days	✓	15-Sep-2025	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2536-A-11 UNPROCESSED	E440	07-Sep-2025	14-Sep-2025	180 days	7 days	✓	15-Sep-2025	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2536-A-12 UNPROCESSED	E440	07-Sep-2025	14-Sep-2025	180 days	7 days	✓	15-Sep-2025	180 days	7 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 Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2536-A-2 UNPROCESSED	E440	07-Sep-2025	14-Sep-2025	180 days	7 days	✓	15-Sep-2025	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2536-A-3 UNPROCESSED	E440	07-Sep-2025	14-Sep-2025	180 days	7 days	✓	15-Sep-2025	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2536-A-4 UNPROCESSED	E440	07-Sep-2025	14-Sep-2025	180 days	7 days	✓	15-Sep-2025	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2536-A-5 UNPROCESSED	E440	07-Sep-2025	14-Sep-2025	180 days	7 days	✓	15-Sep-2025	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2536-A-6 UNPROCESSED	E440	07-Sep-2025	14-Sep-2025	180 days	7 days	✓	15-Sep-2025	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2536-A-7 UNPROCESSED	E440	07-Sep-2025	14-Sep-2025	180 days	7 days	✓	15-Sep-2025	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2536-A-8 UNPROCESSED	E440	07-Sep-2025	14-Sep-2025	180 days	7 days	✓	15-Sep-2025	180 days	7 days	✓
Metals : Metals in Soil/Solid by CRC ICPMS										
LDPE bag BA 2536-A-9 UNPROCESSED	E440	07-Sep-2025	14-Sep-2025	180 days	7 days	✓	15-Sep-2025	180 days	7 days	✓
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2536-A-1 UNPROCESSED	E144	07-Sep-2025	----	----	----		12-Sep-2025	----	----	

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 Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2536-A-10 UNPROCESSED	E144	07-Sep-2025	----	----	----		12-Sep-2025	----	----	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2536-A-11 UNPROCESSED	E144	07-Sep-2025	----	----	----		12-Sep-2025	----	----	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2536-A-12 UNPROCESSED	E144	07-Sep-2025	----	----	----		12-Sep-2025	----	----	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2536-A-2 UNPROCESSED	E144	07-Sep-2025	----	----	----		12-Sep-2025	----	----	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2536-A-3 UNPROCESSED	E144	07-Sep-2025	----	----	----		12-Sep-2025	----	----	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2536-A-4 UNPROCESSED	E144	07-Sep-2025	----	----	----		12-Sep-2025	----	----	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2536-A-5 UNPROCESSED	E144	07-Sep-2025	----	----	----		12-Sep-2025	----	----	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2536-A-6 UNPROCESSED	E144	07-Sep-2025	----	----	----		12-Sep-2025	----	----	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2536-A-7 UNPROCESSED	E144	07-Sep-2025	----	----	----		12-Sep-2025	----	----	

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 Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2536-A-8 UNPROCESSED	E144	07-Sep-2025	----	----	----		12-Sep-2025	----	----	
Physical Tests : Moisture Content by Gravimetry										
LDPE bag BA 2536-A-9 UNPROCESSED	E144	07-Sep-2025	----	----	----		12-Sep-2025	----	----	
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2536-A-1 UNPROCESSED	E108	07-Sep-2025	14-Sep-2025	30 days	7 days	✓	15-Sep-2025	30 days	7 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2536-A-10 UNPROCESSED	E108	07-Sep-2025	14-Sep-2025	30 days	7 days	✓	15-Sep-2025	30 days	7 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2536-A-11 UNPROCESSED	E108	07-Sep-2025	14-Sep-2025	30 days	7 days	✓	15-Sep-2025	30 days	7 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2536-A-12 UNPROCESSED	E108	07-Sep-2025	14-Sep-2025	30 days	7 days	✓	15-Sep-2025	30 days	7 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2536-A-2 UNPROCESSED	E108	07-Sep-2025	14-Sep-2025	30 days	7 days	✓	15-Sep-2025	30 days	7 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2536-A-3 UNPROCESSED	E108	07-Sep-2025	14-Sep-2025	30 days	7 days	✓	15-Sep-2025	30 days	7 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2536-A-4 UNPROCESSED	E108	07-Sep-2025	14-Sep-2025	30 days	7 days	✓	15-Sep-2025	30 days	7 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 Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2536-A-5 UNPROCESSED	E108	07-Sep-2025	14-Sep-2025	30 days	7 days	✓	15-Sep-2025	30 days	7 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2536-A-6 UNPROCESSED	E108	07-Sep-2025	14-Sep-2025	30 days	7 days	✓	15-Sep-2025	30 days	7 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2536-A-7 UNPROCESSED	E108	07-Sep-2025	14-Sep-2025	30 days	7 days	✓	15-Sep-2025	30 days	7 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2536-A-8 UNPROCESSED	E108	07-Sep-2025	14-Sep-2025	30 days	7 days	✓	15-Sep-2025	30 days	7 days	✓
Physical Tests : pH by Meter (1:2 Soil:Water Extraction)										
LDPE bag BA 2536-A-9 UNPROCESSED	E108	07-Sep-2025	14-Sep-2025	30 days	7 days	✓	15-Sep-2025	30 days	7 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2536-A-1 UNPROCESSED	E512	12-Sep-2025	14-Sep-2025	33 days	7 days	✓	14-Sep-2025	33 days	7 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2536-A-10 UNPROCESSED	E512	12-Sep-2025	14-Sep-2025	33 days	7 days	✓	14-Sep-2025	33 days	7 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2536-A-11 UNPROCESSED	E512	12-Sep-2025	14-Sep-2025	33 days	7 days	✓	14-Sep-2025	33 days	7 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2536-A-12 UNPROCESSED	E512	12-Sep-2025	14-Sep-2025	33 days	7 days	✓	14-Sep-2025	33 days	7 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 Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2536-A-2 UNPROCESSED	E512	12-Sep-2025	14-Sep-2025	33 days	7 days	✓	14-Sep-2025	33 days	7 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2536-A-3 UNPROCESSED	E512	12-Sep-2025	14-Sep-2025	33 days	7 days	✓	14-Sep-2025	33 days	7 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2536-A-4 UNPROCESSED	E512	12-Sep-2025	14-Sep-2025	33 days	7 days	✓	14-Sep-2025	33 days	7 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2536-A-5 UNPROCESSED	E512	12-Sep-2025	14-Sep-2025	33 days	7 days	✓	14-Sep-2025	33 days	7 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2536-A-6 UNPROCESSED	E512	12-Sep-2025	14-Sep-2025	33 days	7 days	✓	14-Sep-2025	33 days	7 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2536-A-7 UNPROCESSED	E512	12-Sep-2025	14-Sep-2025	33 days	7 days	✓	14-Sep-2025	33 days	7 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2536-A-8 UNPROCESSED	E512	12-Sep-2025	14-Sep-2025	33 days	7 days	✓	14-Sep-2025	33 days	7 days	✓
TCLP Metals : Mercury by CVAAS (TCLP)										
Glass vial - total (lab preserved) BA 2536-A-9 UNPROCESSED	E512	12-Sep-2025	14-Sep-2025	33 days	7 days	✓	14-Sep-2025	33 days	7 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2536-A-1 UNPROCESSED	E444	12-Sep-2025	14-Sep-2025	185 days	7 days	✓	15-Sep-2025	185 days	7 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 Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2536-A-10 UNPROCESSED	E444	12-Sep-2025	14-Sep-2025	185 days	7 days	✓	15-Sep-2025	185 days	7 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2536-A-11 UNPROCESSED	E444	12-Sep-2025	14-Sep-2025	185 days	7 days	✓	15-Sep-2025	185 days	7 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2536-A-12 UNPROCESSED	E444	12-Sep-2025	14-Sep-2025	185 days	7 days	✓	15-Sep-2025	185 days	7 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2536-A-2 UNPROCESSED	E444	12-Sep-2025	14-Sep-2025	185 days	7 days	✓	15-Sep-2025	185 days	7 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2536-A-3 UNPROCESSED	E444	12-Sep-2025	14-Sep-2025	185 days	7 days	✓	15-Sep-2025	185 days	7 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2536-A-4 UNPROCESSED	E444	12-Sep-2025	14-Sep-2025	185 days	7 days	✓	15-Sep-2025	185 days	7 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2536-A-5 UNPROCESSED	E444	12-Sep-2025	14-Sep-2025	185 days	7 days	✓	15-Sep-2025	185 days	7 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2536-A-6 UNPROCESSED	E444	12-Sep-2025	14-Sep-2025	185 days	7 days	✓	15-Sep-2025	185 days	7 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2536-A-7 UNPROCESSED	E444	12-Sep-2025	14-Sep-2025	185 days	7 days	✓	15-Sep-2025	185 days	7 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* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2536-A-8 UNPROCESSED	E444	12-Sep-2025	14-Sep-2025	185 days	7 days	✓	15-Sep-2025	185 days	7 days	✓
TCLP Metals : Metals by CRC ICPMS (TCLP)										
HDPE - total (lab preserved) BA 2536-A-9 UNPROCESSED	E444	12-Sep-2025	14-Sep-2025	185 days	7 days	✓	15-Sep-2025	185 days	7 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2536-A-1 UNPROCESSED	EPP444	07-Sep-2025	12-Sep-2025	----	----		----	28 days	5 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2536-A-10 UNPROCESSED	EPP444	07-Sep-2025	12-Sep-2025	----	----		----	28 days	5 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2536-A-11 UNPROCESSED	EPP444	07-Sep-2025	12-Sep-2025	----	----		----	28 days	5 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2536-A-12 UNPROCESSED	EPP444	07-Sep-2025	12-Sep-2025	----	----		----	28 days	5 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2536-A-2 UNPROCESSED	EPP444	07-Sep-2025	12-Sep-2025	----	----		----	28 days	5 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2536-A-3 UNPROCESSED	EPP444	07-Sep-2025	12-Sep-2025	----	----		----	28 days	5 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2536-A-4 UNPROCESSED	EPP444	07-Sep-2025	12-Sep-2025	----	----		----	28 days	5 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 Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)										
BA 2536-A-5 UNPROCESSED	EPP444	07-Sep-2025	12-Sep-2025	----	----		----	28 days	5 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)										
BA 2536-A-6 UNPROCESSED	EPP444	07-Sep-2025	12-Sep-2025	----	----		----	28 days	5 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)										
BA 2536-A-7 UNPROCESSED	EPP444	07-Sep-2025	12-Sep-2025	----	----		----	28 days	5 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)										
BA 2536-A-8 UNPROCESSED	EPP444	07-Sep-2025	12-Sep-2025	----	----		----	28 days	5 days	✓
TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)										
BA 2536-A-9 UNPROCESSED	EPP444	07-Sep-2025	12-Sep-2025	----	----		----	28 days	5 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			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
pH by Meter (1:2 Soil:Water Extraction)	E108	2216269	1	17	5.8	5.0	✓
Moisture Content by Gravimetry	E144	2216270	1	12	8.3	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	2216268	1	17	5.8	5.0	✓
Metals by CRC ICPMS (TCLP)	E444	2218095	1	12	8.3	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	2216267	1	17	5.8	5.0	✓
Mercury by CVAAS (TCLP)	E512	2218094	1	12	8.3	5.0	✓
Laboratory Control Samples (LCS)							
pH by Meter (1:2 Soil:Water Extraction)	E108	2216269	1	17	5.8	5.0	✓
Moisture Content by Gravimetry	E144	2216270	1	12	8.3	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	2216268	2	17	11.7	10.0	✓
Mercury in Soil/Solid by CVAAS	E510	2216267	2	17	11.7	10.0	✓
Method Blanks (MB)							
Moisture Content by Gravimetry	E144	2216270	1	12	8.3	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	2216268	1	17	5.8	5.0	✓
Metals by CRC ICPMS (TCLP)	E444	2218095	1	12	8.3	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	2216267	1	17	5.8	5.0	✓
Mercury by CVAAS (TCLP)	E512	2218094	1	12	8.3	5.0	✓
Matrix Spikes (MS)							
Metals by CRC ICPMS (TCLP)	E444	2218095	1	12	8.3	5.0	✓
Mercury by CVAAS (TCLP)	E512	2218094	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 ± 5°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 ºC) 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 HNO3 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 HNO3 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°C) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water.

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 HNO3 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	: **VA25C3240**	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	: Veolia Weekly Bottom Ash-Suite	Date Samples Received	: 08-Sep-2025 11:45
PO	: 1000497676	Date Analysis Commenced	: 12-Sep-2025
C-O-C number	: ----	Issue Date	: 15-Sep-2025 14:29
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*
Kim Jensen	Department Manager - Metals	Vancouver Metals, Burnaby, British Columbia
Ophelia Chiu	Department Manager - Organics	Vancouver Organics, Burnaby, British Columbia
Robin Weeks	Supervisor - Organics Extractions	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).

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*
Physical Tests (QC Lot: 2216269)											
FJ2502807-003	Anonymous	pH (1:2 soil:water)	----	E108	0.10	pH units	8.54	8.60	0.7%	5%	----
Physical Tests (QC Lot: 2216270)											
VA25C3240-001	BA 2536-A-1 UNPROCESSED	Moisture	----	E144	0.25	%	28.2	28.6	1.70%	20%	----
Metals (QC Lot: 2216267)											
FJ2502807-003	Anonymous	Mercury	7439-97-6	E510	0.0050	mg/kg	0.0430	0.0302	34.8%	40%	----
Metals (QC Lot: 2216268)											
FJ2502807-003	Anonymous	Aluminum	7429-90-5	E440	50	mg/kg	5180	4790	7.75%	40%	----
		Antimony	7440-36-0	E440	0.10	mg/kg	0.51	0.42	0.09	Diff <2x LOR	----
		Arsenic	7440-38-2	E440	0.10	mg/kg	4.89	4.28	13.1%	30%	----
		Barium	7440-39-3	E440	0.50	mg/kg	271	245	10.3%	40%	----
		Beryllium	7440-41-7	E440	0.10	mg/kg	0.43	0.33	0.09	Diff <2x LOR	----
		Bismuth	7440-69-9	E440	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		Boron	7440-42-8	E440	5.0	mg/kg	5.3	<5.0	0.3	Diff <2x LOR	----
		Cadmium	7440-43-9	E440	0.020	mg/kg	0.425	0.374	12.7%	30%	----
		Calcium	7440-70-2	E440	50	mg/kg	10600	7910	28.9%	30%	----
		Chromium	7440-47-3	E440	0.50	mg/kg	10.1	9.77	3.64%	30%	----
		Cobalt	7440-48-4	E440	0.10	mg/kg	5.18	4.97	4.14%	30%	----
		Copper	7440-50-8	E440	0.50	mg/kg	8.58	7.72	10.6%	30%	----
		Iron	7439-89-6	E440	50	mg/kg	15700	12300	24.9%	30%	----
		Lead	7439-92-1	E440	0.50	mg/kg	6.47	5.84	10.2%	40%	----
		Lithium	7439-93-2	E440	2.0	mg/kg	6.2	6.2	0.02	Diff <2x LOR	----
		Magnesium	7439-95-4	E440	20	mg/kg	3730	2730	31.2%	30%	DUP-H
		Manganese	7439-96-5	E440	1.0	mg/kg	417	403	3.33%	30%	----
		Molybdenum	7439-98-7	E440	0.10	mg/kg	0.86	0.69	21.6%	40%	----
		Nickel	7440-02-0	E440	0.50	mg/kg	19.5	18.7	4.31%	30%	----
		Phosphorus	7723-14-0	E440	50	mg/kg	1140	671	52.2%	30%	DUP-H
		Potassium	7440-09-7	E440	100	mg/kg	1050	900	15.9%	40%	----
		Selenium	7782-49-2	E440	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		Silver	7440-22-4	E440	0.10	mg/kg	0.13	0.12	0.01	Diff <2x LOR	----
		Sodium	7440-23-5	E440	50	mg/kg	57	<50	7	Diff <2x LOR	----

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: 2216268) - continued											
FJ2502807-003	Anonymous	Strontium	7440-24-6	E440	0.50	mg/kg	29.3	26.2	11.4%	40%	----
		Sulfur	7704-34-9	E440	1000	mg/kg	<1000	<1000	0	Diff <2x LOR	----
		Thallium	7440-28-0	E440	0.050	mg/kg	0.102	0.094	0.008	Diff <2x LOR	----
		Tin	7440-31-5	E440	2.0	mg/kg	<2.0	<2.0	0	Diff <2x LOR	----
		Titanium	7440-32-6	E440	1.0	mg/kg	22.6	18.3	21.1%	40%	----
		Tungsten	7440-33-7	E440	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Uranium	7440-61-1	E440	0.050	mg/kg	0.576	0.483	17.5%	30%	----
		Vanadium	7440-62-2	E440	0.20	mg/kg	22.1	19.5	12.7%	30%	----
		Zinc	7440-66-6	E440	2.0	mg/kg	58.1	51.1	12.9%	30%	----
		Zirconium	7440-67-7	E440	1.0	mg/kg	1.9	1.6	0.2	Diff <2x LOR	----
TCLP Metals (QC Lot: 2218094)											
VA25C3240-001	BA 2536-A-1 UNPROCESSED	Mercury, TCLP	7439-97-6	E512	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
TCLP Metals (QC Lot: 2218095)											
VA25C3240-001	BA 2536-A-1 UNPROCESSED	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	0.81	0.79	0.02	Diff <2x LOR	----
		Cadmium, TCLP	7440-43-9	E444	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Calcium, TCLP	7440-70-2	E444	10	mg/L	902	882	2.24%	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	<0.050	<0.050	0	Diff <2x LOR	----
		Copper, TCLP	7440-50-8	E444	0.050	mg/L	0.654	0.642	1.84%	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	7.2	7.1	0.05	Diff <2x LOR	----
		Nickel, TCLP	7440-02-0	E444	0.25	mg/L	<0.25	<0.25	0	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	<0.50	<0.50	0	Diff <2x LOR	----

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*
TCLP Metals (QC Lot: 2218095) - continued											
VA25C3240-001	BA 2536-A-1 UNPROCESSED	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: 2216270)						
Moisture	----	E144	0.25	%	<0.25	----
Metals (QCLot: 2216267)						
Mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	----
Metals (QCLot: 2216268)						
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: 2216268) - 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: 2218094)						
Mercury, TCLP	7439-97-6	E512	0.001	mg/L	<0.0010	----
TCLP Metals (QCLot: 2218095)						
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: 2216269)									
pH (1:2 soil:water)	----	E108	----	pH units	6 pH units	101	95.0	105	----
Physical Tests (QCLot: 2216270)									
Moisture	----	E144	0.25	%	50 %	101	90.0	110	----
Metals (QCLot: 2216267)									
Mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	101	80.0	120	----
Metals (QCLot: 2216268)									
Aluminum	7429-90-5	E440	50	mg/kg	200 mg/kg	105	80.0	120	----
Antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	106	80.0	120	----
Arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	108	80.0	120	----
Barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	102	80.0	120	----
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	101	80.0	120	----
Bismuth	7440-69-9	E440	0.2	mg/kg	100 mg/kg	98.0	80.0	120	----
Boron	7440-42-8	E440	5	mg/kg	100 mg/kg	102	80.0	120	----
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	103	80.0	120	----
Calcium	7440-70-2	E440	50	mg/kg	5000 mg/kg	101	80.0	120	----
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	104	80.0	120	----
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	101	80.0	120	----
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	99.4	80.0	120	----
Iron	7439-89-6	E440	50	mg/kg	100 mg/kg	104	80.0	120	----
Lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	102	80.0	120	----
Lithium	7439-93-2	E440	2	mg/kg	25 mg/kg	106	80.0	120	----
Magnesium	7439-95-4	E440	20	mg/kg	5000 mg/kg	106	80.0	120	----
Manganese	7439-96-5	E440	1	mg/kg	25 mg/kg	104	80.0	120	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	105	80.0	120	----
Nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	100	80.0	120	----
Phosphorus	7723-14-0	E440	50	mg/kg	1000 mg/kg	113	80.0	120	----
Potassium	7440-09-7	E440	100	mg/kg	5000 mg/kg	104	80.0	120	----
Selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	102	80.0	120	----
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	97.0	80.0	120	----
Sodium	7440-23-5	E440	50	mg/kg	5000 mg/kg	102	80.0	120	----
Strontium	7440-24-6	E440	0.5	mg/kg	25 mg/kg	105	80.0	120	----
Sulfur	7704-34-9	E440	1000	mg/kg	5000 mg/kg	104	80.0	120	----

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
Metals (QCLot: 2216268) - continued									
Thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	101	80.0	120	----
Tin	7440-31-5	E440	2	mg/kg	50 mg/kg	103	80.0	120	----
Titanium	7440-32-6	E440	1	mg/kg	25 mg/kg	103	80.0	120	----
Tungsten	7440-33-7	E440	0.5	mg/kg	10 mg/kg	104	80.0	120	----
Uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	105	80.0	120	----
Vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	106	80.0	120	----
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	98.6	80.0	120	----
Zirconium	7440-67-7	E440	1	mg/kg	10 mg/kg	100	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: 2218094)										
VA25C3240-001	BA 2536-A-1 UNPROCESSED	Mercury, TCLP	7439-97-6	E512	0.0032 mg/L	0.003 mg/L	106	50.0	140	----
TCLP Metals (QCLot: 2218095)										
VA25C3240-001	BA 2536-A-1 UNPROCESSED	Antimony, TCLP	7440-36-0	E444	4.87 mg/L	5 mg/L	97.4	50.0	140	----
		Arsenic, TCLP	7440-38-2	E444	5.2 mg/L	5 mg/L	104	50.0	140	----
		Barium, TCLP	7440-39-3	E444	12.1 mg/L	12.5 mg/L	96.5	50.0	140	----
		Beryllium, TCLP	7440-41-7	E444	0.248 mg/L	0.25 mg/L	99.4	50.0	140	----
		Boron, TCLP	7440-42-8	E444	9.53 mg/L	10 mg/L	95.3	50.0	140	----
		Cadmium, TCLP	7440-43-9	E444	0.237 mg/L	0.25 mg/L	94.8	50.0	140	----
		Calcium, TCLP	7440-70-2	E444	ND mg/L	----	ND	50.0	140	----
		Chromium, TCLP	7440-47-3	E444	1.24 mg/L	1.25 mg/L	99.1	50.0	140	----
		Cobalt, TCLP	7440-48-4	E444	0.247 mg/L	0.25 mg/L	99.0	50.0	140	----
		Copper, TCLP	7440-50-8	E444	2.31 mg/L	2.5 mg/L	92.4	50.0	140	----
		Iron, TCLP	7439-89-6	E444	237 mg/L	250 mg/L	94.9	50.0	140	----
		Lead, TCLP	7439-92-1	E444	9.72 mg/L	10 mg/L	97.2	50.0	140	----
		Magnesium, TCLP	7439-95-4	E444	258 mg/L	250 mg/L	103	50.0	140	----
		Nickel, TCLP	7440-02-0	E444	2.44 mg/L	2.5 mg/L	97.6	50.0	140	----
		Selenium, TCLP	7782-49-2	E444	4.79 mg/L	5 mg/L	95.8	50.0	140	----
		Silver, TCLP	7440-22-4	E444	0.085 mg/L	0.1 mg/L	85.4	50.0	140	----
		Thallium, TCLP	7440-28-0	E444	4.8 mg/L	5 mg/L	96.6	50.0	140	----
		Uranium, TCLP	7440-61-1	E444	5.03 mg/L	5 mg/L	101	50.0	150	----
		Vanadium, TCLP	7440-62-2	E444	0.75 mg/L	0.75 mg/L	100	50.0	140	----
		Zinc, TCLP	7440-66-6	E444	9.47 mg/L	10 mg/L	94.7	50.0	140	----
		Zirconium, TCLP	7440-67-7	E444	0.7 mg/L	1 mg/L	70.6	50.0	150	----

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:

					Reference Material (RM) Report				
					RM Target	Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Concentration	RM	Low	High	Qualifier
Metals (QCLot: 2216267)									
QC-2216267-003	MRCA-21	Mercury	7439-97-6	E510	0.068 mg/kg	103	70.0	130	----
Metals (QCLot: 2216268)									
QC-2216268-003	MRCA-21	Aluminum	7429-90-5	E440	22500 mg/kg	114	70.0	130	----
QC-2216268-003	MRCA-21	Antimony	7440-36-0	E440	24.8 mg/kg	102	70.0	130	----
QC-2216268-003	MRCA-21	Arsenic	7440-38-2	E440	21.2 mg/kg	100	70.0	130	----
QC-2216268-003	MRCA-21	Barium	7440-39-3	E440	788 mg/kg	101	70.0	130	----
QC-2216268-003	MRCA-21	Beryllium	7440-41-7	E440	1.82 mg/kg	106	70.0	130	----
QC-2216268-003	MRCA-21	Bismuth	7440-69-9	E440	1.78 mg/kg	96.4	70.0	130	----
QC-2216268-003	MRCA-21	Cadmium	7440-43-9	E440	2.15 mg/kg	103	70.0	130	----
QC-2216268-003	MRCA-21	Calcium	7440-70-2	E440	4900 mg/kg	108	70.0	130	----
QC-2216268-003	MRCA-21	Chromium	7440-47-3	E440	56.9 mg/kg	102	70.0	130	----
QC-2216268-003	MRCA-21	Cobalt	7440-48-4	E440	32 mg/kg	101	70.0	130	----
QC-2216268-003	MRCA-21	Copper	7440-50-8	E440	969 mg/kg	100	70.0	130	----
QC-2216268-003	MRCA-21	Iron	7439-89-6	E440	32700 mg/kg	102	70.0	130	----
QC-2216268-003	MRCA-21	Lead	7439-92-1	E440	919 mg/kg	93.3	70.0	130	----
QC-2216268-003	MRCA-21	Lithium	7439-93-2	E440	47.3 mg/kg	110	70.0	130	----
QC-2216268-003	MRCA-21	Magnesium	7439-95-4	E440	7780 mg/kg	109	70.0	130	----
QC-2216268-003	MRCA-21	Manganese	7439-96-5	E440	8640 mg/kg	101	70.0	130	----
QC-2216268-003	MRCA-21	Molybdenum	7439-98-7	E440	25.1 mg/kg	101	70.0	130	----
QC-2216268-003	MRCA-21	Nickel	7440-02-0	E440	1000 mg/kg	101	70.0	130	----
QC-2216268-003	MRCA-21	Phosphorus	7723-14-0	E440	660 mg/kg	110	70.0	130	----
QC-2216268-003	MRCA-21	Potassium	7440-09-7	E440	10800 mg/kg	104	70.0	130	----
QC-2216268-003	MRCA-21	Selenium	7782-49-2	E440	1.04 mg/kg	86.5	60.0	140	----
QC-2216268-003	MRCA-21	Silver	7440-22-4	E440	8.98 mg/kg	98.2	70.0	130	----
QC-2216268-003	MRCA-21	Sodium	7440-23-5	E440	1770 mg/kg	116	70.0	130	----
QC-2216268-003	MRCA-21	Strontium	7440-24-6	E440	41 mg/kg	106	70.0	130	----
QC-2216268-003	MRCA-21	Sulfur	7704-34-9	E440	3940 mg/kg	104	50.0	150	----
QC-2216268-003	MRCA-21	Thallium	7440-28-0	E440	0.907 mg/kg	96.5	70.0	130	----
QC-2216268-003	MRCA-21	Tin	7440-31-5	E440	3.79 mg/kg	99.1	40.0	160	----
QC-2216268-003	MRCA-21	Titanium	7440-32-6	E440	2790 mg/kg	106	70.0	130	----
QC-2216268-003	MRCA-21	Tungsten	7440-33-7	E440	6.99 mg/kg	129	70.0	130	----
QC-2216268-003	MRCA-21	Uranium	7440-61-1	E440	3.97 mg/kg	117	70.0	130	----
QC-2216268-003	MRCA-21	Vanadium	7440-62-2	E440	66.2 mg/kg	103	70.0	130	----

Sub-Matrix:

					Reference Material (RM) Report				
					RM Target	Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Concentration	RM	Low	High	Qualifier
Metals (QCLot: 2216268) - continued									
QC-2216268-003	MRCA-21	Zinc	7440-66-6	E440	828 mg/kg	97.7	70.0	130	----
QC-2216268-003	MRCA-21	Zirconium	7440-67-7	E440	6.91 mg/kg	93.8	70.0	130	----

ALS Environmental

Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

COC # _____

Page 1 of 1

Environmental Division Vancouver
Work Order Reference
VA25C3240

Telephone : +1 604 253 4188

Report To		**Report Format / Distribution**		**Service Requested** (Rush for r
Company:	Veolia Canada / Burnaby Waste To Energy Facility	"Veolia Email Distribution List" please		
Contact:	Brian Graham / Darcie Grace			
Address:	5150 Riverbend Drive	Email 1:	Darcie.grace@veolia.com	
	Burnaby BC	Email 2:	lprenzo.ilao@veolia.com	
Phone:	604-521-1025 Fax:	Email 3:	karen.thornquist@veolia.com	Ana
			brent.kirkpatrick@metrovancouver.org	
			Sarah.Wellman@metrovancouver.org	
Invoice To	Same as Report ? Veolia Water Canada	**Client / Project Information**		Please indicate below Filter
Hardcopy of Invoice with Report?		Job #:	Veolia Weekly Bottom Ash - Suite	
Company:	Veolia Water Canada-/-Burnaby Waste To Energy	PO / AFE:	PO#	
Contact:	Danny George, Purchaser/Darcie Grace, SHE Manager	LSD:	(includes 2:1 pH)	
Address:	5150 Riverbend Drive, Burnaby BC V3N 4V3			
Phone:	604 521 1025 Fax:	Quote #:		
Lab Work Order # (lab use only)	C3240	**ALS Contact:**	**Sampler:**	

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-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 2536-A-1 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-2 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-3 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-4 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-5 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-6 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-7 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-8 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-9 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-10 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-11 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-12 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
water Aquatic																	

'm may delay a
es with the Ter
numbers and

NT RELEASE (

Released by:	SHIPMENT RECEPTION (lab use only) Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	SHIPMENT VERIFICATION (lab use only) Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
	08/09/25	08:40				°C		Sep-8	11:45	

GENF 20.00 Front

28°C

No Ice

Bottom Ash Worksheet

Date sample composited (DD/MM/YYYY)	08/09/2025
Person doing the sampling	Noah T
Total Sample Weight before processing, kg	141.65
Weight of Material >3/8", kg	70
Weight of Material that cannot be processed to <3/8" (metal, wood, etc), kg	58.1
Final Total weight of Processed Bottom Ash, kg	83.75

UnProcessed

Return this form with the filled Weekly Bottom Ash Composite Sample containers

Completely fill twelve (12) 500ml sample containers and label each with "Bottom Ash" and the week the ash composite is from, i.e. "June 9-15, 2019"

ALS Environmental

Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

COC # _____

Page 1 of 1

Environmental Division
Vancouver
Work Order Reference
VA25C3240

Telephone : +1 604 253 4188

Report To		**Report Format / Distribution**		**Service Requested** (Rush for r
Company:	Veolia Canada / Burnaby Waste To Energy Facility	"Veolia Email Distribution List" please		
Contact:	Brian Graham / Darcie Grace			
Address:	5150 Riverbend Drive	Email 1:	Darcie.grace@veolia.com	
	Burnaby BC	Email 2:	lorenzo.ilao@veolia.com	
Phone:	604-521-1025 Fax:	Email 3:	karen.thornquist@veolia.com	Ana
			brent.kirkpatrick@metrovancouver.org	
			Sarah.Wellman@metrovancouver.org	
Invoice To	Same as Report ? Veolia Water Canada	**Client / Project Information**		Please indicate below Filter
Hardcopy of Invoice with Report?		Job #:	Veolia Weekly Bottom Ash - Suite	
Company:	Veolia Water Canada / Burnaby Waste To Energy	PO / AFE:	PO#	
Contact:	Danny George, Purchaser/Darcie Grace, SHE Manager	LSD:	(includes 2:1 pH)	
Address:	5150 Riverbend Drive, Burnaby BC V3N 4V3			
Phone:	604 521 1025 Fax:	Quote #:		
Lab Work Order # (lab use only)	C3240	**ALS Contact:**	**Sampler:**	

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-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 2536-A-1 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-2 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-3 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-4 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-5 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-6 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-7 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-8 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-9 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-10 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-11 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
	BA 2536-A-12 UNPROCESSED	Sep 01 to 07,2025	9:00	Soil	X	X				X							1
water Aquatic																	

'm may delay a
es with the Ter
numbers and

NT RELEASE (

Released by:	SHIPMENT RECEPTION (lab use only) Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature: °C
	08/09/25	08:40				

SHIPMENT VERIFICATION (lab use only) Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
	Sep-8	11:45	

GENF 20.00 Front

23°C

No Ice

Bottom Ash Worksheet

Date sample composited (DD/MM/YYYY)	08/09/2025
Person doing the sampling	Noah T
Total Sample Weight before processing, kg	141.65
Weight of Material >3/8", kg	70
Weight of Material that cannot be processed to <3/8" (metal, wood, etc), kg	58.1
Final Total weight of Processed Bottom Ash, kg	83.75

UnProcessed

Return this form with the filled Weekly Bottom Ash Composite Sample containers

Completely fill twelve (12) 500ml sample containers and label each with "Bottom Ash" and the week the ash composite is from, i.e. "June 9-15, 2019"