

## Bottom Ash Data

2025 Week 39

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The following analytical report represents bottom ash composite results for week 39 of 2025 (September 21, 2025 to September 27, 2025).

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



**CERTIFICATE OF ANALYSIS**

<b>Work Order</b>	: <b>VA25C5893</b>		
<b>Client</b>	: <b>Veolia Environmental Services Canada</b>	<b>Laboratory</b>	: ALS Environmental - Vancouver
<b>Contact</b>	: Brian Graham	<b>Account Manager</b>	: Gulraj Dhanaua
<b>Address</b>	: 5150 Riverbend Dr. Burnaby British Columbia Canada V3N 4V3	<b>Address</b>	: 8081 Lougheed Highway Burnaby BC Canada V5A 1W9
<b>Telephone</b>	: ----	<b>E-mail</b>	: Gulraj.Dhanaua@alsglobal.com
<b>Project</b>	: Veolia Weekly Bottom Ash-Suite	<b>Telephone</b>	: +1 604 253 4188
<b>PO</b>	: 1000497676	<b>Date Samples Received</b>	: 01-Oct-2025 12:15
<b>C-O-C number</b>	: ----	<b>Date Analysis Commenced</b>	: 03-Oct-2025
<b>Sampler</b>	: ----	<b>Issue Date</b>	: 09-Oct-2025 07:17
<b>Site</b>	: Metro Van Ash Sampling Program		
<b>Quote number</b>	: VA25-VISI100-001		
<b>No. of samples received</b>	: 12		
<b>No. of samples analysed</b>	: 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).

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

<: less than.

>: greater than.

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

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.



## Analytical Results

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

					Client sample ID	BA 2539-A-1-Sept 25 to 27 ----	BA 2539-A-2-Sept 25 to 27 ----	BA 2539-A-3-Sept 25 to 27 ----	BA 2539-A-4-Sept 25 to 27 ----	BA 2539-A-5-Sept 25 to 27 ----
					Client sampling date / time	27-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5893-001	VA25C5893-002	VA25C5893-003	VA25C5893-004	VA25C5893-005	
					Result	Result	Result	Result	Result	
<b>Physical Tests</b>										
Moisture	----	E144/VA	0.25	%	24.7	25.5	25.0	24.8	24.8	
pH (1:2 soil:water)	----	E108/VA	0.10	pH units	10.48	10.54	10.77	10.62	10.70	
<b>Metals</b>										
Aluminum	7429-90-5	E440/VA	50	mg/kg	36100	40700	33200	35100	32100	
Antimony	7440-36-0	E440/VA	0.10	mg/kg	54.3	78.3	90.6	81.9	72.4	
Arsenic	7440-38-2	E440/VA	0.10	mg/kg	20.9	10.3	12.3	11.2	10.7	
Barium	7440-39-3	E440/VA	0.50	mg/kg	637	629	592	530	581	
Beryllium	7440-41-7	E440/VA	0.10	mg/kg	0.37	0.33	0.33	0.32	0.31	
Bismuth	7440-69-9	E440/VA	0.20	mg/kg	7.25	6.14	11.4	10.2	7.86	
Boron	7440-42-8	E440/VA	5.0	mg/kg	170	157	145	150	131	
Cadmium	7440-43-9	E440/VA	0.020	mg/kg	6.63	209	7.17	6.49	7.16	
Calcium	7440-70-2	E440/VA	50	mg/kg	132000	128000	140000	130000	119000	
Chromium	7440-47-3	E440/VA	0.50	mg/kg	162	179	227	147	220	
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	59.6	67.7	73.6	122	499	
Copper	7440-50-8	E440/VA	0.50	mg/kg	2070	6060	5830	3260	13600	
Iron	7439-89-6	E440/VA	50	mg/kg	54000	54000	57500	63100	72200	
Lead	7439-92-1	E440/VA	0.50	mg/kg	2040	412	511	537	9490	
Lithium	7439-93-2	E440/VA	2.0	mg/kg	31.9	30.0	31.6	30.7	72.4	
Magnesium	7439-95-4	E440/VA	20	mg/kg	12600	12000	12800	12000	11200	
Manganese	7439-96-5	E440/VA	1.0	mg/kg	1270	4030	1150	872	944	
Mercury	7439-97-6	E510/VA	0.0500	mg/kg	<0.0500	<0.0500	<0.0500	0.0604	0.0535	



## Analytical Results

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

					Client sample ID	BA 2539-A-1-Sept 25 to 27	BA 2539-A-2-Sept 25 to 27	BA 2539-A-3-Sept 25 to 27	BA 2539-A-4-Sept 25 to 27	BA 2539-A-5-Sept 25 to 27
					Client sampling date / time	27-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5893-001	VA25C5893-002	VA25C5893-003	VA25C5893-004	VA25C5893-005	
					Result	Result	Result	Result	Result	
<b>Metals</b>										
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg	63.1	72.3	86.1	73.3	254	
Nickel	7440-02-0	E440/VA	0.50	mg/kg	193	255	251	398	756	
Phosphorus	7723-14-0	E440/VA	50	mg/kg	12700	11800	13200	12300	9520	
Potassium	7440-09-7	E440/VA	100	mg/kg	5730	5910	5540	5230	4690	
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.38	0.41	0.40	0.48	0.36	
Silver	7440-22-4	E440/VA	0.10	mg/kg	3.47	3.49	14.6	4.75	3.56	
Sodium	7440-23-5	E440/VA	50	mg/kg	16600	16900	15900	15200	14400	
Strontium	7440-24-6	E440/VA	0.50	mg/kg	316	299	309	298	321	
Sulfur	7704-34-9	E440/VA	1000	mg/kg	11800	10900	12200	11200	9200	
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	89.7	86.6	111	90.8	107	
Titanium	7440-32-6	E440/VA	1.0	mg/kg	334	292	250	308	328	
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	28.1	30.5	55.8	40.1	23.0	
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.80	1.62	1.68	1.60	1.39	
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	32.0	30.8	31.3	29.0	28.6	
Zinc	7440-66-6	E440/VA	2.0	mg/kg	3880	2330	3530	2970	2750	
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	6.1	3.9	3.3	3.7	1.9	
<b>TCLP Metals</b>										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units	11.41	11.44	11.43	11.46	11.43	
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	2.05	2.14	2.02	2.04	2.20	
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	4.97	4.97	4.97	4.97	4.97	



### Analytical Results

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

					Client sample ID	BA 2539-A-1-Sept 25 to 27	BA 2539-A-2-Sept 25 to 27	BA 2539-A-3-Sept 25 to 27	BA 2539-A-4-Sept 25 to 27	BA 2539-A-5-Sept 25 to 27
					Client sampling date / time	27-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5893-001	VA25C5893-002	VA25C5893-003	VA25C5893-004	VA25C5893-005	
					Result	Result	Result	Result	Result	
<b>TCLP Metals</b>										
pH, TCLP final	----	EPP444/VA	0.010	pH units	9.39	9.72	9.85	9.40	9.85	
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	0.77	0.77	0.75	0.83	0.77	
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	836	825	833	813	825	
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	1.03	1.10	1.06	0.960	1.10	
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	5.7	6.6	5.5	8.4	5.8	
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)

					Client sample ID				
					BA 2539-A-1-Sept 25 to 27	BA 2539-A-2-Sept 25 to 27	BA 2539-A-3-Sept 25 to 27	BA 2539-A-4-Sept 25 to 27	BA 2539-A-5-Sept 25 to 27
					----	----	----	----	----
					Client sampling date / time				
					27-Sep-2025 00:00	27-Sep-2025 00:00	27-Sep-2025 00:00	27-Sep-2025 00:00	27-Sep-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5893-001	VA25C5893-002	VA25C5893-003	VA25C5893-004	VA25C5893-005
					Result	Result	Result	Result	Result
<b>TCLP Metals</b>									
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)

					Client sample ID				
					BA 2539-A-6-Sept 25 to 27	BA 2539-A-7-Sept 25 to 27	BA 2539-A-8-Sept 25 to 27	BA 2539-A-9-Sept 25 to 27	BA 2539-A-10-Sept 25 to 27
					----	----	----	----	----
					Client sampling date / time				
					27-Sep-2025 00:00	27-Sep-2025 00:00	27-Sep-2025 00:00	27-Sep-2025 00:00	27-Sep-2025 00:00
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5893-006	VA25C5893-007	VA25C5893-008	VA25C5893-009	VA25C5893-010
					Result	Result	Result	Result	Result
<b>Physical Tests</b>									
Moisture	----	E144/VA	0.25	%	25.8	24.4	24.3	24.8	23.8
pH (1:2 soil:water)	----	E108/VA	0.10	pH units	10.74	10.71	10.63	10.72	10.59
<b>Metals</b>									
Aluminum	7429-90-5	E440/VA	50	mg/kg	50500	34400	35100	36600	39000
Antimony	7440-36-0	E440/VA	0.10	mg/kg	167	95.5	81.1	75.8	99.6
Arsenic	7440-38-2	E440/VA	0.10	mg/kg	14.0	12.6	12.0	13.9	11.7
Barium	7440-39-3	E440/VA	0.50	mg/kg	617	577	683	560	664
Beryllium	7440-41-7	E440/VA	0.10	mg/kg	0.36	0.35	0.38	0.35	0.35
Bismuth	7440-69-9	E440/VA	0.20	mg/kg	22.5	7.69	9.25	7.37	18.9
Boron	7440-42-8	E440/VA	5.0	mg/kg	215	148	150	162	182
Cadmium	7440-43-9	E440/VA	0.020	mg/kg	26.8	7.85	8.83	7.69	10.8
Calcium	7440-70-2	E440/VA	50	mg/kg	119000	135000	136000	134000	134000



## Analytical Results

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

					Client sample ID				
					BA 2539-A-6-Sept 25 to 27 ----	BA 2539-A-7-Sept 25 to 27 ----	BA 2539-A-8-Sept 25 to 27 ----	BA 2539-A-9-Sept 25 to 27 ----	BA 2539-A-10-Sept 25 to 27 ----
Client sampling date / time					27-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5893-006	VA25C5893-007	VA25C5893-008	VA25C5893-009	VA25C5893-010
					Result	Result	Result	Result	Result
<b>Metals</b>									
Chromium	7440-47-3	E440/VA	0.50	mg/kg	148	462	192	156	159
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	78.3	302	152	61.8	102
Copper	7440-50-8	E440/VA	0.50	mg/kg	6980	1930	1610	1900	17400
Iron	7439-89-6	E440/VA	50	mg/kg	50500	59100	65300	47100	49400
Lead	7439-92-1	E440/VA	0.50	mg/kg	2020	1520	2170	443	1700
Lithium	7439-93-2	E440/VA	2.0	mg/kg	31.9	29.6	35.4	30.7	43.0
Magnesium	7439-95-4	E440/VA	20	mg/kg	12200	11200	12600	12400	12400
Manganese	7439-96-5	E440/VA	1.0	mg/kg	923	993	798	1010	944
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	75.8	103	120	65.8	81.1
Nickel	7440-02-0	E440/VA	0.50	mg/kg	1080	596	188	200	302
Phosphorus	7723-14-0	E440/VA	50	mg/kg	12900	12400	13200	13600	12000
Potassium	7440-09-7	E440/VA	100	mg/kg	5100	5490	5620	5960	5610
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.31	0.43	0.64	0.42	0.54
Silver	7440-22-4	E440/VA	0.10	mg/kg	>36.4	>34.9	3.80	19.4	>35.6
Sodium	7440-23-5	E440/VA	50	mg/kg	16900	16600	17000	17000	17300
Strontium	7440-24-6	E440/VA	0.50	mg/kg	278	301	421	300	292
Sulfur	7704-34-9	E440/VA	1000	mg/kg	9700	11900	10800	11400	11400
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	55.2	147	90.2	77.2	652
Titanium	7440-32-6	E440/VA	1.0	mg/kg	272	234	248	223	323



## Analytical Results

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

					Client sample ID				
					BA 2539-A-6-Sept 25 to 27 ----	BA 2539-A-7-Sept 25 to 27 ----	BA 2539-A-8-Sept 25 to 27 ----	BA 2539-A-9-Sept 25 to 27 ----	BA 2539-A-10-Sept 25 to 27 ----
Client sampling date / time					27-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5893-006	VA25C5893-007	VA25C5893-008	VA25C5893-009	VA25C5893-010
					Result	Result	Result	Result	Result
<b>Metals</b>									
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	23.5	98.4	22.7	34.6	34.6
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.49	1.67	1.67	1.74	1.70
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	32.4	30.6	39.2	30.8	34.3
Zinc	7440-66-6	E440/VA	2.0	mg/kg	6280	3080	4840	2880	3270
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	6.4	4.6	3.5	5.4	3.7
<b>TCLP Metals</b>									
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units	11.43	11.42	11.45	11.43	11.41
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	2.27	2.23	3.34	2.13	2.24
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	4.97	4.97	4.97	4.97	4.97
pH, TCLP final	----	EPP444/VA	0.010	pH units	9.71	9.80	9.87	10.11	10.00
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	0.80	0.77	0.81	0.72	0.71
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	822	843	834	801	772
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	1.04	1.12	1.05	1.16	1.03
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 2539-A-6-Sept 25 to 27 ----	BA 2539-A-7-Sept 25 to 27 ----	BA 2539-A-8-Sept 25 to 27 ----	BA 2539-A-9-Sept 25 to 27 ----	BA 2539-A-10-Sept 25 to 27 ----
Client sampling date / time					27-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5893-006	VA25C5893-007	VA25C5893-008	VA25C5893-009	VA25C5893-010
					Result	Result	Result	Result	Result
<b>TCLP Metals</b>									
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	6.9	4.8	5.8	3.2	4.2
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
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)

					Client sample ID				
					BA 2539-A-11-Sept 25 to 27 ----	BA 2539-A-12-Sept 25 to 27 ----	----	----	----
Client sampling date / time					27-Sep-2025 00:00	27-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5893-011	VA25C5893-012	----	----	----
					Result	Result	----	----	----
<b>Physical Tests</b>									
Moisture	----	E144/VA	0.25	%	25.8	25.6	----	----	----
pH (1:2 soil:water)	----	E108/VA	0.10	pH units	10.62	10.78	----	----	----



### Analytical Results

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

					Client sample ID	BA 2539-A-11- Sept 25 to 27 ----	BA 2539-A-12-Sept 25 to 27 ----	----	----	----
					Client sampling date / time	27-Sep-2025 00:00	27-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5893-011	VA25C5893-012	----	----	----	
					Result	Result	----	----	----	
<b>Metals</b>										
Aluminum	7429-90-5	E440/VA	50	mg/kg	40300	43600	----	----	----	
Antimony	7440-36-0	E440/VA	0.10	mg/kg	98.9	83.9	----	----	----	
Arsenic	7440-38-2	E440/VA	0.10	mg/kg	12.9	11.1	----	----	----	
Barium	7440-39-3	E440/VA	0.50	mg/kg	610	624	----	----	----	
Beryllium	7440-41-7	E440/VA	0.10	mg/kg	0.48	0.37	----	----	----	
Bismuth	7440-69-9	E440/VA	0.20	mg/kg	7.73	7.12	----	----	----	
Boron	7440-42-8	E440/VA	5.0	mg/kg	169	140	----	----	----	
Cadmium	7440-43-9	E440/VA	0.020	mg/kg	7.99	6.95	----	----	----	
Calcium	7440-70-2	E440/VA	50	mg/kg	136000	138000	----	----	----	
Chromium	7440-47-3	E440/VA	0.50	mg/kg	334	166	----	----	----	
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	254	70.4	----	----	----	
Copper	7440-50-8	E440/VA	0.50	mg/kg	7090	5170	----	----	----	
Iron	7439-89-6	E440/VA	50	mg/kg	59700	46700	----	----	----	
Lead	7439-92-1	E440/VA	0.50	mg/kg	485	425	----	----	----	
Lithium	7439-93-2	E440/VA	2.0	mg/kg	33.4	33.7	----	----	----	
Magnesium	7439-95-4	E440/VA	20	mg/kg	12400	12400	----	----	----	
Manganese	7439-96-5	E440/VA	1.0	mg/kg	937	987	----	----	----	
Mercury	7439-97-6	E510/VA	0.0500	mg/kg	<0.0500	<0.0500	----	----	----	
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg	82.5	61.4	----	----	----	
Nickel	7440-02-0	E440/VA	0.50	mg/kg	437	239	----	----	----	
Phosphorus	7723-14-0	E440/VA	50	mg/kg	12000	12000	----	----	----	



**Analytical Results**

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

					Client sample ID	BA 2539-A-11-Sept 25 to 27	BA 2539-A-12-Sept 25 to 27	----	----	----
					Client sampling date / time	27-Sep-2025 00:00	27-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5893-011	VA25C5893-012	----	----	----	----
					Result	Result	----	----	----	----
<b>Metals</b>										
Potassium	7440-09-7	E440/VA	100	mg/kg	5480	5680	----	----	----	----
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.45	0.52	----	----	----	----
Silver	7440-22-4	E440/VA	0.10	mg/kg	>60.6	>30.8	----	----	----	----
Sodium	7440-23-5	E440/VA	50	mg/kg	16800	17000	----	----	----	----
Strontium	7440-24-6	E440/VA	0.50	mg/kg	297	307	----	----	----	----
Sulfur	7704-34-9	E440/VA	1000	mg/kg	12100	11600	----	----	----	----
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	87.0	----	----	----	----
Titanium	7440-32-6	E440/VA	1.0	mg/kg	327	276	----	----	----	----
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	69.2	159	----	----	----	----
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.85	1.69	----	----	----	----
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	34.0	32.3	----	----	----	----
Zinc	7440-66-6	E440/VA	2.0	mg/kg	3090	3600	----	----	----	----
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	3.8	6.1	----	----	----	----
<b>TCLP Metals</b>										
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units	11.46	11.48	----	----	----	----
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	2.99	4.48	----	----	----	----
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	4.97	4.97	----	----	----	----
pH, TCLP final	----	EPP444/VA	0.010	pH units	10.09	10.17	----	----	----	----
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 2539-A-11-Sept 25 to 27	BA 2539-A-12-Sept 25 to 27	----	----	----
					Client sampling date / time	27-Sep-2025 00:00	27-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5893-011	VA25C5893-012	----	----	----	
					Result	Result	----	----	----	
<b>TCLP Metals</b>										
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	0.72	0.68	----	----	----	
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	764	763	----	----	----	
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	1.04	1.13	----	----	----	
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	2.8	2.8	----	----	----	
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.





## QUALITY CONTROL INTERPRETIVE REPORT

<p><b>Work Order</b> : <b>VA25C5893</b></p> <p><b>Client</b> : <b>Veolia Environmental Services Canada</b></p> <p><b>Contact</b> : Brian Graham</p> <p><b>Address</b> : 5150 Riverbend Dr. Burnaby BC Canada V3N 4V3</p> <p><b>Telephone</b> : ----</p> <p><b>Project</b> : Veolia Weekly Bottom Ash-Suite</p> <p><b>PO</b> : 1000497676</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : Metro Van Ash Sampling Program</p> <p><b>Quote number</b> : VA25-VIS1100-001</p> <p><b>No. of samples received</b> : 12</p> <p><b>No. of samples analysed</b> : 12</p>	<p><b>Page</b> : 1 of 17</p> <p><b>Laboratory</b> : ALS Environmental - Vancouver</p> <p><b>Account Manager</b> : Gulraj Dhanaua</p> <p><b>Address</b> : 8081 Lougheed Highway Burnaby, British Columbia Canada V5A 1W9</p> <p><b>Telephone</b> : +1 604 253 4188</p> <p><b>Date Samples Received</b> : 01-Oct-2025 12:15</p> <p><b>Issue Date</b> : 09-Oct-2025 07:18</p>
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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

- Reference Material (RM) Sample outliers occur - please see the following pages for full details.

### ***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
<b>Duplicate (DUP) RPDs</b>								
Metals	Anonymous	Anonymous	Bismuth	7440-69-9	E440	45.8 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	Boron	7440-42-8	E440	50.2 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	Cadmium	7440-43-9	E440	38.0 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	Cobalt	7440-48-4	E440	38.3 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	Copper	7440-50-8	E440	85.4 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	Lead	7439-92-1	E440	47.6 % DUP-H	40%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	Lithium	7439-93-2	E440	93.0 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	Nickel	7440-02-0	E440	45.8 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	Silver	7440-22-4	E440	150 % DUP-H	40%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	Titanium	7440-32-6	E440	40.7 % DUP-H	40%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	Zinc	7440-66-6	E440	47.2 % 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.

Reference Material (RM) Sample								
Metals	QC-MRG2-2261525 003	----	Bismuth	7440-69-9	E440	133 % MES	70.0-130%	Recovery greater than upper control limit

**Result Qualifiers**

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).





## 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	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 2539-A-10-Sept 25 to 27	E510	27-Sep-2025	07-Oct-2025	28 days	11 days	✔	07-Oct-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 2539-A-11-Sept 25 to 27	E510	27-Sep-2025	07-Oct-2025	28 days	11 days	✔	07-Oct-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 2539-A-12-Sept 25 to 27	E510	27-Sep-2025	07-Oct-2025	28 days	11 days	✔	07-Oct-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 2539-A-1-Sept 25 to 27	E510	27-Sep-2025	07-Oct-2025	28 days	11 days	✔	07-Oct-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 2539-A-2-Sept 25 to 27	E510	27-Sep-2025	07-Oct-2025	28 days	11 days	✔	07-Oct-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 2539-A-3-Sept 25 to 27	E510	27-Sep-2025	07-Oct-2025	28 days	11 days	✔	07-Oct-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 2539-A-4-Sept 25 to 27	E510	27-Sep-2025	07-Oct-2025	28 days	11 days	✔	07-Oct-2025	28 days	0 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	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 2539-A-5-Sept 25 to 27	E510	27-Sep-2025	07-Oct-2025	28 days	11 days	✔	07-Oct-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 2539-A-6-Sept 25 to 27	E510	27-Sep-2025	07-Oct-2025	28 days	11 days	✔	07-Oct-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 2539-A-7-Sept 25 to 27	E510	27-Sep-2025	07-Oct-2025	28 days	11 days	✔	07-Oct-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 2539-A-8-Sept 25 to 27	E510	27-Sep-2025	07-Oct-2025	28 days	11 days	✔	07-Oct-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 2539-A-9-Sept 25 to 27	E510	27-Sep-2025	07-Oct-2025	28 days	11 days	✔	07-Oct-2025	28 days	0 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>										
<b>LDPE bag</b> BA 2539-A-10-Sept 25 to 27	E440	27-Sep-2025	07-Oct-2025	180 days	11 days	✔	08-Oct-2025	180 days	11 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>										
<b>LDPE bag</b> BA 2539-A-11-Sept 25 to 27	E440	27-Sep-2025	07-Oct-2025	180 days	11 days	✔	08-Oct-2025	180 days	11 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>										
<b>LDPE bag</b> BA 2539-A-12-Sept 25 to 27	E440	27-Sep-2025	07-Oct-2025	180 days	11 days	✔	08-Oct-2025	180 days	11 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>										
<b>LDPE bag</b> BA 2539-A-1-Sept 25 to 27	E440	27-Sep-2025	07-Oct-2025	180 days	11 days	✔	08-Oct-2025	180 days	11 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		
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 2539-A-2-Sept 25 to 27	E440	27-Sep-2025	07-Oct-2025	180 days	11 days	✔	08-Oct-2025	180 days	11 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 2539-A-3-Sept 25 to 27	E440	27-Sep-2025	07-Oct-2025	180 days	11 days	✔	08-Oct-2025	180 days	11 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 2539-A-4-Sept 25 to 27	E440	27-Sep-2025	07-Oct-2025	180 days	11 days	✔	08-Oct-2025	180 days	11 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 2539-A-5-Sept 25 to 27	E440	27-Sep-2025	07-Oct-2025	180 days	11 days	✔	08-Oct-2025	180 days	11 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 2539-A-6-Sept 25 to 27	E440	27-Sep-2025	07-Oct-2025	180 days	11 days	✔	08-Oct-2025	180 days	11 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 2539-A-7-Sept 25 to 27	E440	27-Sep-2025	07-Oct-2025	180 days	11 days	✔	08-Oct-2025	180 days	11 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 2539-A-8-Sept 25 to 27	E440	27-Sep-2025	07-Oct-2025	180 days	11 days	✔	08-Oct-2025	180 days	11 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 2539-A-9-Sept 25 to 27	E440	27-Sep-2025	07-Oct-2025	180 days	11 days	✔	08-Oct-2025	180 days	11 days	✔	
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 2539-A-10-Sept 25 to 27	E144	27-Sep-2025	----	----	----		06-Oct-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		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
<b>LDPE bag</b> BA 2539-A-11-Sept 25 to 27	E144	27-Sep-2025	----	----	----		06-Oct-2025	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
<b>LDPE bag</b> BA 2539-A-12-Sept 25 to 27	E144	27-Sep-2025	----	----	----		06-Oct-2025	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
<b>LDPE bag</b> BA 2539-A-1-Sept 25 to 27	E144	27-Sep-2025	----	----	----		06-Oct-2025	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
<b>LDPE bag</b> BA 2539-A-2-Sept 25 to 27	E144	27-Sep-2025	----	----	----		06-Oct-2025	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
<b>LDPE bag</b> BA 2539-A-3-Sept 25 to 27	E144	27-Sep-2025	----	----	----		06-Oct-2025	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
<b>LDPE bag</b> BA 2539-A-4-Sept 25 to 27	E144	27-Sep-2025	----	----	----		06-Oct-2025	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
<b>LDPE bag</b> BA 2539-A-5-Sept 25 to 27	E144	27-Sep-2025	----	----	----		06-Oct-2025	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
<b>LDPE bag</b> BA 2539-A-6-Sept 25 to 27	E144	27-Sep-2025	----	----	----		06-Oct-2025	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
<b>LDPE bag</b> BA 2539-A-7-Sept 25 to 27	E144	27-Sep-2025	----	----	----		06-Oct-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		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 2539-A-8-Sept 25 to 27	E144	27-Sep-2025	----	----	----		06-Oct-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 2539-A-9-Sept 25 to 27	E144	27-Sep-2025	----	----	----		06-Oct-2025	----	----		
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 2539-A-10-Sept 25 to 27	E108	27-Sep-2025	07-Oct-2025	30 days	11 days	✔	07-Oct-2025	30 days	11 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 2539-A-11-Sept 25 to 27	E108	27-Sep-2025	07-Oct-2025	30 days	11 days	✔	07-Oct-2025	30 days	11 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 2539-A-12-Sept 25 to 27	E108	27-Sep-2025	07-Oct-2025	30 days	11 days	✔	07-Oct-2025	30 days	11 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 2539-A-1-Sept 25 to 27	E108	27-Sep-2025	07-Oct-2025	30 days	11 days	✔	07-Oct-2025	30 days	11 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 2539-A-2-Sept 25 to 27	E108	27-Sep-2025	07-Oct-2025	30 days	11 days	✔	07-Oct-2025	30 days	11 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 2539-A-3-Sept 25 to 27	E108	27-Sep-2025	07-Oct-2025	30 days	11 days	✔	07-Oct-2025	30 days	11 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 2539-A-4-Sept 25 to 27	E108	27-Sep-2025	07-Oct-2025	30 days	11 days	✔	07-Oct-2025	30 days	11 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	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
<b>LDPE bag</b> BA 2539-A-5-Sept 25 to 27	E108	27-Sep-2025	07-Oct-2025	30 days	11 days	✔	07-Oct-2025	30 days	11 days	✔
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
<b>LDPE bag</b> BA 2539-A-6-Sept 25 to 27	E108	27-Sep-2025	07-Oct-2025	30 days	11 days	✔	07-Oct-2025	30 days	11 days	✔
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
<b>LDPE bag</b> BA 2539-A-7-Sept 25 to 27	E108	27-Sep-2025	07-Oct-2025	30 days	11 days	✔	07-Oct-2025	30 days	11 days	✔
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
<b>LDPE bag</b> BA 2539-A-8-Sept 25 to 27	E108	27-Sep-2025	07-Oct-2025	30 days	11 days	✔	07-Oct-2025	30 days	11 days	✔
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>										
<b>LDPE bag</b> BA 2539-A-9-Sept 25 to 27	E108	27-Sep-2025	07-Oct-2025	30 days	11 days	✔	07-Oct-2025	30 days	11 days	✔
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>										
<b>Glass vial - total (lab preserved)</b> BA 2539-A-10-Sept 25 to 27	E512	03-Oct-2025	05-Oct-2025	35 days	8 days	✔	05-Oct-2025	35 days	8 days	✔
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>										
<b>Glass vial - total (lab preserved)</b> BA 2539-A-11-Sept 25 to 27	E512	03-Oct-2025	05-Oct-2025	35 days	8 days	✔	05-Oct-2025	35 days	8 days	✔
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>										
<b>Glass vial - total (lab preserved)</b> BA 2539-A-12-Sept 25 to 27	E512	03-Oct-2025	05-Oct-2025	35 days	8 days	✔	05-Oct-2025	35 days	8 days	✔
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>										
<b>Glass vial - total (lab preserved)</b> BA 2539-A-1-Sept 25 to 27	E512	03-Oct-2025	05-Oct-2025	35 days	8 days	✔	05-Oct-2025	35 days	8 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		
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 2539-A-2-Sept 25 to 27	E512	03-Oct-2025	05-Oct-2025	35 days	8 days	✔	05-Oct-2025	35 days	8 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 2539-A-3-Sept 25 to 27	E512	03-Oct-2025	05-Oct-2025	35 days	8 days	✔	05-Oct-2025	35 days	8 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 2539-A-4-Sept 25 to 27	E512	03-Oct-2025	05-Oct-2025	35 days	8 days	✔	05-Oct-2025	35 days	8 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 2539-A-5-Sept 25 to 27	E512	03-Oct-2025	05-Oct-2025	35 days	8 days	✔	05-Oct-2025	35 days	8 days	✔	
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<b>Glass vial - total (lab preserved)</b> BA 2539-A-6-Sept 25 to 27	E512	03-Oct-2025	05-Oct-2025	35 days	8 days	✔	05-Oct-2025	35 days	8 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 2539-A-7-Sept 25 to 27	E512	03-Oct-2025	05-Oct-2025	35 days	8 days	✔	05-Oct-2025	35 days	8 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 2539-A-8-Sept 25 to 27	E512	03-Oct-2025	05-Oct-2025	35 days	8 days	✔	05-Oct-2025	35 days	8 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 2539-A-9-Sept 25 to 27	E512	03-Oct-2025	05-Oct-2025	35 days	8 days	✔	05-Oct-2025	35 days	8 days	✔	
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>											
<b>HDPE - total (lab preserved)</b> BA 2539-A-10-Sept 25 to 27	E444	03-Oct-2025	05-Oct-2025	187 days	8 days	✔	06-Oct-2025	187 days	8 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		
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>											
HDPE - total (lab preserved) BA 2539-A-11-Sept 25 to 27	E444	03-Oct-2025	05-Oct-2025	187 days	8 days	✔	06-Oct-2025	187 days	8 days	✔	
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>											
HDPE - total (lab preserved) BA 2539-A-12-Sept 25 to 27	E444	03-Oct-2025	05-Oct-2025	187 days	8 days	✔	06-Oct-2025	187 days	8 days	✔	
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>											
HDPE - total (lab preserved) BA 2539-A-1-Sept 25 to 27	E444	03-Oct-2025	05-Oct-2025	187 days	8 days	✔	06-Oct-2025	187 days	8 days	✔	
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>											
HDPE - total (lab preserved) BA 2539-A-2-Sept 25 to 27	E444	03-Oct-2025	05-Oct-2025	187 days	8 days	✔	06-Oct-2025	187 days	8 days	✔	
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<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>											
HDPE - total (lab preserved) BA 2539-A-5-Sept 25 to 27	E444	03-Oct-2025	05-Oct-2025	187 days	8 days	✔	06-Oct-2025	187 days	8 days	✔	
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>											
HDPE - total (lab preserved) BA 2539-A-6-Sept 25 to 27	E444	03-Oct-2025	05-Oct-2025	187 days	8 days	✔	06-Oct-2025	187 days	8 days	✔	
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>											
HDPE - total (lab preserved) BA 2539-A-7-Sept 25 to 27	E444	03-Oct-2025	05-Oct-2025	187 days	8 days	✔	06-Oct-2025	187 days	8 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	
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>										
HDPE - total (lab preserved) BA 2539-A-8-Sept 25 to 27	E444	03-Oct-2025	05-Oct-2025	187 days	8 days	✔	06-Oct-2025	187 days	8 days	✔
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>										
HDPE - total (lab preserved) BA 2539-A-9-Sept 25 to 27	E444	03-Oct-2025	05-Oct-2025	187 days	8 days	✔	06-Oct-2025	187 days	8 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2539-A-10-Sept 25 to 27	EPP444	27-Sep-2025	03-Oct-2025	----	----		----	28 days	7 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2539-A-11-Sept 25 to 27	EPP444	27-Sep-2025	03-Oct-2025	----	----		----	28 days	7 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2539-A-12-Sept 25 to 27	EPP444	27-Sep-2025	03-Oct-2025	----	----		----	28 days	7 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2539-A-1-Sept 25 to 27	EPP444	27-Sep-2025	03-Oct-2025	----	----		----	28 days	7 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2539-A-2-Sept 25 to 27	EPP444	27-Sep-2025	03-Oct-2025	----	----		----	28 days	7 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2539-A-3-Sept 25 to 27	EPP444	27-Sep-2025	03-Oct-2025	----	----		----	28 days	7 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2539-A-4-Sept 25 to 27	EPP444	27-Sep-2025	03-Oct-2025	----	----		----	28 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		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2539-A-5-Sept 25 to 27	EPP444	27-Sep-2025	03-Oct-2025	----	----		----	28 days	7 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2539-A-6-Sept 25 to 27	EPP444	27-Sep-2025	03-Oct-2025	----	----		----	28 days	7 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2539-A-7-Sept 25 to 27	EPP444	27-Sep-2025	03-Oct-2025	----	----		----	28 days	7 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2539-A-8-Sept 25 to 27	EPP444	27-Sep-2025	03-Oct-2025	----	----		----	28 days	7 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS) BA 2539-A-9-Sept 25 to 27	EPP444	27-Sep-2025	03-Oct-2025	----	----		----	28 days	7 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
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
pH by Meter (1:2 Soil:Water Extraction)	E108	2261527	1	20	5.0	5.0	✔
Moisture Content by Gravimetry	E144	2261528	1	20	5.0	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	2261525	1	20	5.0	5.0	✔
Metals by CRC ICPMS (TCLP)	E444	2258912	1	12	8.3	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	2261526	1	20	5.0	5.0	✔
Mercury by CVAAS (TCLP)	E512	2258911	1	12	8.3	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
pH by Meter (1:2 Soil:Water Extraction)	E108	2261527	1	20	5.0	5.0	✔
Moisture Content by Gravimetry	E144	2261528	1	20	5.0	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	2261525	2	20	10.0	10.0	✔
Mercury in Soil/Solid by CVAAS	E510	2261526	2	20	10.0	10.0	✔
<b>Method Blanks (MB)</b>							
Moisture Content by Gravimetry	E144	2261528	1	20	5.0	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	2261525	1	20	5.0	5.0	✔
Metals by CRC ICPMS (TCLP)	E444	2258912	1	12	8.3	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	2261526	1	20	5.0	5.0	✔
Mercury by CVAAS (TCLP)	E512	2258911	1	12	8.3	5.0	✔
<b>Matrix Spikes (MS)</b>							
Metals by CRC ICPMS (TCLP)	E444	2258912	1	12	8.3	5.0	✔
Mercury by CVAAS (TCLP)	E512	2258911	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°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 <sub>3</sub> 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 <sub>3</sub> 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.



<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
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 <sub>3</sub> 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

<b>Work Order</b>	<b>: VA25C5893</b>	<b>Page</b>	: 1 of 12
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<b>Project</b>	: Veolia Weekly Bottom Ash-Suite	<b>Date Samples Received</b>	: 01-Oct-2025 12:15
<b>PO</b>	: 1000497676	<b>Date Analysis Commenced</b>	: 03-Oct-2025
<b>C-O-C number</b>	: ----	<b>Issue Date</b>	: 09-Oct-2025 07:17
<b>Sampler</b>	: ----		
<b>Site</b>	: Metro Van Ash Sampling Program		
<b>Quote number</b>	: VA25-VISI100-001		
<b>No. of samples received</b>	: 12		
<b>No. of samples analysed</b>	: 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.

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



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## 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

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

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### 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
<b>Physical Tests (QC Lot: 2261527)</b>											
VA25C5885-005	Anonymous	pH (1:2 soil:water)	----	E108	0.10	pH units	12.00	11.92	0.7%	5%	----
<b>Physical Tests (QC Lot: 2261528)</b>											
VA25C5885-005	Anonymous	Moisture	----	E144	0.25	%	28.2	27.9	0.851%	20%	----
<b>Metals (QC Lot: 2261525)</b>											
VA25C5885-005	Anonymous	Aluminum	7429-90-5	E440	50	mg/kg	48700	33000	38.5%	40%	----
		Antimony	7440-36-0	E440	0.10	mg/kg	68.2	84.1	20.8%	30%	----
		Arsenic	7440-38-2	E440	0.10	mg/kg	13.0	16.6	24.2%	30%	----
		Barium	7440-39-3	E440	0.50	mg/kg	631	630	0.158%	40%	----
		Beryllium	7440-41-7	E440	0.10	mg/kg	0.39	0.38	0.006	Diff <2x LOR	----
		Bismuth	7440-69-9	E440	0.20	mg/kg	13.5	21.5	45.8%	30%	DUP-H
		Boron	7440-42-8	E440	5.0	mg/kg	157	263	50.2%	30%	DUP-H
		Cadmium	7440-43-9	E440	0.020	mg/kg	12.1	8.26	38.0%	30%	DUP-H
		Calcium	7440-70-2	E440	50	mg/kg	123000	142000	14.3%	30%	----
		Chromium	7440-47-3	E440	0.50	mg/kg	146	173	16.8%	30%	----
		Cobalt	7440-48-4	E440	0.10	mg/kg	211	143	38.3%	30%	DUP-H
		Copper	7440-50-8	E440	0.50	mg/kg	2890	7210	85.4%	30%	DUP-H
		Iron	7439-89-6	E440	50	mg/kg	69800	55100	23.5%	30%	----
		Lead	7439-92-1	E440	0.50	mg/kg	349	567	47.6%	40%	DUP-H
		Lithium	7439-93-2	E440	2.0	mg/kg	29.8	81.5	93.0%	30%	DUP-H
		Magnesium	7439-95-4	E440	20	mg/kg	12200	12900	5.78%	30%	----
		Manganese	7439-96-5	E440	1.0	mg/kg	775	755	2.65%	30%	----
		Molybdenum	7439-98-7	E440	0.10	mg/kg	16.4	18.3	10.8%	40%	----
		Nickel	7440-02-0	E440	0.50	mg/kg	131	209	45.8%	30%	DUP-H
		Phosphorus	7723-14-0	E440	50	mg/kg	10500	12000	13.5%	30%	----
		Potassium	7440-09-7	E440	100	mg/kg	5600	6020	7.39%	40%	----
		Selenium	7782-49-2	E440	0.20	mg/kg	0.44	0.42	0.02	Diff <2x LOR	----
		Silver	7440-22-4	E440	0.10	mg/kg	7.78	54.7	150%	40%	DUP-H
		Sodium	7440-23-5	E440	50	mg/kg	14500	16200	10.8%	40%	----
		Strontium	7440-24-6	E440	0.50	mg/kg	350	306	13.2%	40%	----
		Sulfur	7704-34-9	E440	1000	mg/kg	10800	13400	21.5%	30%	----



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
<b>Metals (QC Lot: 2261525) - continued</b>											
VA25C5885-005	Anonymous	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	132	144	9.30%	40%	----
		Titanium	7440-32-6	E440	1.0	mg/kg	405	268	40.7%	40%	DUP-H
		Tungsten	7440-33-7	E440	0.50	mg/kg	16.5	18.2	10.0%	30%	----
		Uranium	7440-61-1	E440	0.050	mg/kg	1.62	1.72	5.58%	30%	----
		Vanadium	7440-62-2	E440	0.20	mg/kg	31.7	28.8	9.81%	30%	----
		Zinc	7440-66-6	E440	2.0	mg/kg	3040	4910	47.2%	30%	DUP-H
		Zirconium	7440-67-7	E440	1.0	mg/kg	3.4	2.6	0.8	Diff <2x LOR	----
<b>Metals (QC Lot: 2261526)</b>											
VA25C5885-005	Anonymous	Mercury	7439-97-6	E510	0.0500	mg/kg	<0.0500	<0.0500	0	Diff <2x LOR	----
<b>TCLP Metals (QC Lot: 2258911)</b>											
VA25C5893-001	BA 2539-A-1-Sept 25 to 27	Mercury, TCLP	7439-97-6	E512	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
<b>TCLP Metals (QC Lot: 2258912)</b>											
VA25C5893-001	BA 2539-A-1-Sept 25 to 27	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	0.77	0.73	0.03	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	836	814	2.65%	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	1.03	0.972	5.57%	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	5.7	5.5	0.2	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	----
Zirconium, TCLP	7440-67-7	E444	10	mg/L	<10	<10	0	Diff <2x LOR	----		

Page : 5 of 12  
Work Order : VA25C5893  
Client : Veolia Environmental Services Canada  
Project : Veolia Weekly Bottom Ash-Suite



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## Qualifiers

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

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## 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
<b>Physical Tests (QCLot: 2261528)</b>						
Moisture	---	E144	0.25	%	<0.25	---
<b>Metals (QCLot: 2261525)</b>						
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	---
Titanium	7440-32-6	E440	1	mg/kg	<1.0	---
Tungsten	7440-33-7	E440	0.5	mg/kg	<0.50	---



Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Metals (QCLot: 2261525) - continued</b>						
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	----
<b>Metals (QCLot: 2261526)</b>						
Mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	----
<b>TCLP Metals (QCLot: 2258911)</b>						
Mercury, TCLP	7439-97-6	E512	0.001	mg/L	<0.0010	----
<b>TCLP Metals (QCLot: 2258912)</b>						
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
<b>Physical Tests (QCLot: 2261527)</b>									
pH (1:2 soil:water)	---	E108	---	pH units	6 pH units	101	95.0	105	---
<b>Physical Tests (QCLot: 2261528)</b>									
Moisture	---	E144	0.25	%	50 %	100	90.0	110	---
<b>Metals (QCLot: 2261525)</b>									
Aluminum	7429-90-5	E440	50	mg/kg	200 mg/kg	110	80.0	120	---
Antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	110	80.0	120	---
Arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	106	80.0	120	---
Barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	106	80.0	120	---
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	99.5	80.0	120	---
Bismuth	7440-69-9	E440	0.2	mg/kg	100 mg/kg	105	80.0	120	---
Boron	7440-42-8	E440	5	mg/kg	100 mg/kg	95.2	80.0	120	---
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	106	80.0	120	---
Calcium	7440-70-2	E440	50	mg/kg	5000 mg/kg	99.4	80.0	120	---
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	103	80.0	120	---
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	104	80.0	120	---
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	103	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	105	80.0	120	---
Lithium	7439-93-2	E440	2	mg/kg	25 mg/kg	103	80.0	120	---
Magnesium	7439-95-4	E440	20	mg/kg	5000 mg/kg	108	80.0	120	---
Manganese	7439-96-5	E440	1	mg/kg	25 mg/kg	102	80.0	120	---
Molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	109	80.0	120	---
Nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	102	80.0	120	---
Phosphorus	7723-14-0	E440	50	mg/kg	1000 mg/kg	107	80.0	120	---
Potassium	7440-09-7	E440	100	mg/kg	5000 mg/kg	105	80.0	120	---
Selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	101	80.0	120	---
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	101	80.0	120	---
Sodium	7440-23-5	E440	50	mg/kg	5000 mg/kg	104	80.0	120	---
Strontium	7440-24-6	E440	0.5	mg/kg	25 mg/kg	110	80.0	120	---
Sulfur	7704-34-9	E440	1000	mg/kg	5000 mg/kg	105	80.0	120	---
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	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
<b>Metals (QCLot: 2261525) - continued</b>									
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	106	80.0	120	----
Uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	104	80.0	120	----
Vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	105	80.0	120	----
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	101	80.0	120	----
Zirconium	7440-67-7	E440	1	mg/kg	10 mg/kg	110	80.0	120	----
<b>Metals (QCLot: 2261526)</b>									
Mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	92.0	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
<b>TCLP Metals (QCLot: 2258911)</b>										
VA25C5893-001	BA 2539-A-1-Sept 25 to 27	Mercury, TCLP	7439-97-6	E512	0.0029 mg/L	0.003 mg/L	97.2	50.0	140	----
<b>TCLP Metals (QCLot: 2258912)</b>										
VA25C5893-001	BA 2539-A-1-Sept 25 to 27	Antimony, TCLP	7440-36-0	E444	4.85 mg/L	5 mg/L	97.0	50.0	140	----
		Arsenic, TCLP	7440-38-2	E444	4.8 mg/L	5 mg/L	97.1	50.0	140	----
		Barium, TCLP	7440-39-3	E444	11.7 mg/L	12.5 mg/L	93.5	50.0	140	----
		Beryllium, TCLP	7440-41-7	E444	0.240 mg/L	0.25 mg/L	95.9	50.0	140	----
		Boron, TCLP	7440-42-8	E444	9.57 mg/L	10 mg/L	95.7	50.0	140	----
		Cadmium, TCLP	7440-43-9	E444	0.232 mg/L	0.25 mg/L	93.0	50.0	140	----
		Calcium, TCLP	7440-70-2	E444	ND mg/L	----	ND	50.0	140	----
		Chromium, TCLP	7440-47-3	E444	1.19 mg/L	1.25 mg/L	95.3	50.0	140	----
		Cobalt, TCLP	7440-48-4	E444	0.238 mg/L	0.25 mg/L	95.1	50.0	140	----
		Copper, TCLP	7440-50-8	E444	2.29 mg/L	2.5 mg/L	91.5	50.0	140	----
		Iron, TCLP	7439-89-6	E444	232 mg/L	250 mg/L	92.7	50.0	140	----
		Lead, TCLP	7439-92-1	E444	9.18 mg/L	10 mg/L	91.8	50.0	140	----
		Magnesium, TCLP	7439-95-4	E444	240 mg/L	250 mg/L	96.1	50.0	140	----
		Nickel, TCLP	7440-02-0	E444	2.36 mg/L	2.5 mg/L	94.2	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	0.091 mg/L	0.1 mg/L	90.9	50.0	140	----
		Thallium, TCLP	7440-28-0	E444	4.5 mg/L	5 mg/L	89.7	50.0	140	----
		Uranium, TCLP	7440-61-1	E444	4.59 mg/L	5 mg/L	91.8	50.0	150	----
		Vanadium, TCLP	7440-62-2	E444	0.72 mg/L	0.75 mg/L	96.3	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	75.3	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:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Metals (QCLot: 2261525)</b>									
QC-2261525-003	MRCA-21	Aluminum	7429-90-5	E440	22500 mg/kg	116	70.0	130	----
QC-2261525-003	MRCA-21	Antimony	7440-36-0	E440	24.8 mg/kg	113	70.0	130	----
QC-2261525-003	MRCA-21	Arsenic	7440-38-2	E440	21.2 mg/kg	99.1	70.0	130	----
QC-2261525-003	MRCA-21	Barium	7440-39-3	E440	788 mg/kg	104	70.0	130	----
QC-2261525-003	MRCA-21	Beryllium	7440-41-7	E440	1.82 mg/kg	109	70.0	130	----
QC-2261525-003	MRCA-21	Bismuth	7440-69-9	E440	1.78 mg/kg	# 133	70.0	130	MES
QC-2261525-003	MRCA-21	Cadmium	7440-43-9	E440	2.15 mg/kg	106	70.0	130	----
QC-2261525-003	MRCA-21	Calcium	7440-70-2	E440	4900 mg/kg	105	70.0	130	----
QC-2261525-003	MRCA-21	Chromium	7440-47-3	E440	56.9 mg/kg	105	70.0	130	----
QC-2261525-003	MRCA-21	Cobalt	7440-48-4	E440	32 mg/kg	106	70.0	130	----
QC-2261525-003	MRCA-21	Copper	7440-50-8	E440	969 mg/kg	103	70.0	130	----
QC-2261525-003	MRCA-21	Iron	7439-89-6	E440	32700 mg/kg	102	70.0	130	----
QC-2261525-003	MRCA-21	Lead	7439-92-1	E440	919 mg/kg	96.8	70.0	130	----
QC-2261525-003	MRCA-21	Lithium	7439-93-2	E440	47.3 mg/kg	106	70.0	130	----
QC-2261525-003	MRCA-21	Magnesium	7439-95-4	E440	7780 mg/kg	109	70.0	130	----
QC-2261525-003	MRCA-21	Manganese	7439-96-5	E440	8640 mg/kg	101	70.0	130	----
QC-2261525-003	MRCA-21	Molybdenum	7439-98-7	E440	25.1 mg/kg	107	70.0	130	----
QC-2261525-003	MRCA-21	Nickel	7440-02-0	E440	1000 mg/kg	102	70.0	130	----
QC-2261525-003	MRCA-21	Phosphorus	7723-14-0	E440	660 mg/kg	108	70.0	130	----
QC-2261525-003	MRCA-21	Potassium	7440-09-7	E440	10800 mg/kg	108	70.0	130	----
QC-2261525-003	MRCA-21	Selenium	7782-49-2	E440	1.04 mg/kg	106	60.0	140	----
QC-2261525-003	MRCA-21	Silver	7440-22-4	E440	8.98 mg/kg	105	70.0	130	----
QC-2261525-003	MRCA-21	Sodium	7440-23-5	E440	1770 mg/kg	119	70.0	130	----
QC-2261525-003	MRCA-21	Strontium	7440-24-6	E440	41 mg/kg	111	70.0	130	----
QC-2261525-003	MRCA-21	Sulfur	7704-34-9	E440	3940 mg/kg	113	50.0	150	----
QC-2261525-003	MRCA-21	Thallium	7440-28-0	E440	0.907 mg/kg	103	70.0	130	----
QC-2261525-003	MRCA-21	Tin	7440-31-5	E440	3.79 mg/kg	106	40.0	160	----
QC-2261525-003	MRCA-21	Titanium	7440-32-6	E440	2790 mg/kg	108	70.0	130	----
QC-2261525-003	MRCA-21	Tungsten	7440-33-7	E440	6.99 mg/kg	126	70.0	130	----
QC-2261525-003	MRCA-21	Uranium	7440-61-1	E440	3.97 mg/kg	98.5	70.0	130	----
QC-2261525-003	MRCA-21	Vanadium	7440-62-2	E440	66.2 mg/kg	105	70.0	130	----
QC-2261525-003	MRCA-21	Zinc	7440-66-6	E440	828 mg/kg	101	70.0	130	----
QC-2261525-003	MRCA-21	Zirconium	7440-67-7	E440	6.91 mg/kg	111	70.0	130	----



Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Metals (QCLot: 2261526)</b>									
QC-2261526-003	MRCA-21	Mercury	7439-97-6	E510	0.068 mg/kg	92.1	70.0	130	----

## Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).

<b>Report To</b>	<b>Report Format / Distribution</b>	<b>Service Requested</b> (Rush for routine analysis subject to availability)
Company: Veolia Canada / Burnaby Waste To Energy Facility	"Veolia Email Distribution List" please	
Contact: Brian Graham / Darcie Grace		
Address: 5150 Riverbend Drive Burnaby BC	Email 1: Darcie.grace@veolia.com	
Phone: 604-521-1025 Fax:	Email 2: lorenzo.ilao@veolia.com	
	Email 3: karen.thornquist@veolia.com	<b>Analysis Request</b>
	brent.kirkpatrick@metrovancover.org	
	Sarah.Wellman@metrovancover.org	

<b>Invoice To</b> Same as Report? Veolia Water Canada	<b>Client / Project Information</b>	Please indicate below Filtered, Preserved or both (F, P, F/P)																	
Hardcopy of Invoice with Report?	Job #: Veolia Weekly Bottom Ash - Suite																		
Company: Veolia Water Canada / Burnaby Waste To Energy	PO / AFE: PO#	MET-TCLP-VA (all metals, Hg)	MOISTURE	Chrome 6	MET-CSR-FULL-VA (all metals)														
Contact: Danny George, Purchaser/Darcie Grace, SHE Manager	LSD: (includes 2:1 pH)																		
Address: 5150 Riverbend Drive, Burnaby BC V3N 4V3	Quote #:																		
Phone: 604 521 1025 Fax:																			

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 2539-A-1 Sept 25 to 27			Soil	X	X		X							1
	BA 2539-A-2 Sept 25 to 27			Soil	X	X		X							1
	BA 2539-A-3 Sept 25 to 27			Soil	X	X		X							1
	BA 2539-A-4 Sept 25 to 27			Soil	X	X		X							1
	BA 2539-A-5 Sept 25 to 27			Soil	X	X		X							1
	BA 2539-A-6 Sept 25 to 27			Soil	X	X		X							1
	BA 2539-A-7 Sept 25 to 27			Soil	X	X		X							1
	BA 2539-A-8 Sept 25 to 27			Soil	X	X		X							1
	BA 2539-A-9 Sept 25 to 27			Soil	X	X		X							1
	BA 2539-A-10 Sept 25 to 27			Soil	X	X		X							1
	BA 2539-A-11 Sept 25 to 27			Soil	X	X		X							1
	BA 2539-A-12 Sept 25 to 27			Soil	X	X		X							1

Environmental Division  
 Vancouver  
 Work Order Reference  
**VA25C5893**



Telephone : +1 604 253 4188

water Aquatic	
Form may delay analyses with the Test numbers and	

<b>SHIPMENT RECEPTION (lab use only)</b>				<b>SHIPMENT VERIFICATION (lab use only)</b>						
Released by: <i>[Signature]</i>	Date (dd-mmm-yy): 01/10/23	Time (hh-mm): 07:20	Received by: M.J.	Date: Oct 1	Time: 12:15	Temperature: 19°C	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF



**CERTIFICATE OF ANALYSIS**

<b>Work Order</b>	: <b>VA25C5885</b>		
<b>Client</b>	: <b>Veolia Environmental Services Canada</b>	<b>Laboratory</b>	: ALS Environmental - Vancouver
<b>Contact</b>	: Brian Graham	<b>Account Manager</b>	: Gulraj Dhanaua
<b>Address</b>	: 5150 Riverbend Dr. Burnaby British Columbia Canada V3N 4V3	<b>Address</b>	: 8081 Lougheed Highway Burnaby BC Canada V5A 1W9
<b>Telephone</b>	: ----	<b>E-mail</b>	: Gulraj.Dhanaua@alsglobal.com
<b>Project</b>	: Veolia Weekly Bottom Ash-Suite	<b>Telephone</b>	: +1 604 253 4188
<b>PO</b>	: 1000497676	<b>Date Samples Received</b>	: 01-Oct-2025 12:15
<b>C-O-C number</b>	: ----	<b>Date Analysis Commenced</b>	: 02-Oct-2025
<b>Sampler</b>	: ----	<b>Issue Date</b>	: 09-Oct-2025 08:54
<b>Site</b>	: Metro Van Ash Sampling Program		
<b>Quote number</b>	: VA25-VISI100-001		
<b>No. of samples received</b>	: 12		
<b>No. of samples analysed</b>	: 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).

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

<: less than.

>: greater than.

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

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

## Workorder Comments

Bismuth recovery was elevated in the soil RM for E440 (145%). This has occurred multiple times with our new RM, and it is suspected to be a hot spot related to the RM itself. The LCS recovery was good (97.3%), and it is not expected that there is any impact on the sample results for BA 25-39-A-1, BA 25-39-A-2, BA 25-39-A-3 and BA 25-39-A-4 (Samples 001,002,003,004)



**Analytical Results**

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

					BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-2 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-3 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-4 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24 ----
					Client sample ID				
					Client sampling date / time				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5885-001	VA25C5885-002	VA25C5885-003	VA25C5885-004	VA25C5885-005
					Result	Result	Result	Result	Result
<b>Physical Tests</b>									
Moisture	----	E144/VA	0.25	%	26.5	24.3	21.8	26.3	28.2
pH (1:2 soil:water)	----	E108/VA	0.10	pH units	11.41	11.63	11.56	11.82	12.00
<b>Metals</b>									
Aluminum	7429-90-5	E440/VA	50	mg/kg	32800	53900	36200	50100	48700
Antimony	7440-36-0	E440/VA	0.10	mg/kg	129	88.8	87.0	65.1	68.2
Arsenic	7440-38-2	E440/VA	0.10	mg/kg	12.1	16.2	17.4	13.3	13.0
Barium	7440-39-3	E440/VA	0.50	mg/kg	558	633	563	601	631
Beryllium	7440-41-7	E440/VA	0.10	mg/kg	0.37	0.38	0.38	0.39	0.39
Bismuth	7440-69-9	E440/VA	0.20	mg/kg	10.6	11.9	15.6	17.4	13.5
Boron	7440-42-8	E440/VA	5.0	mg/kg	209	182	180	184	157
Cadmium	7440-43-9	E440/VA	0.020	mg/kg	7.15	8.24	8.53	6.69	12.1
Calcium	7440-70-2	E440/VA	50	mg/kg	124000	136000	146000	132000	123000
Chromium	7440-47-3	E440/VA	0.50	mg/kg	143	111	203	120	146
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	162	276	65.6	208	211
Copper	7440-50-8	E440/VA	0.50	mg/kg	1560	1260	6260	1620	2890
Iron	7439-89-6	E440/VA	50	mg/kg	43800	30000	48800	70200	69800
Lead	7439-92-1	E440/VA	0.50	mg/kg	329	383	643	346	349
Lithium	7439-93-2	E440/VA	2.0	mg/kg	47.2	45.8	33.1	47.6	29.8
Magnesium	7439-95-4	E440/VA	20	mg/kg	11300	11500	12400	12200	12200
Manganese	7439-96-5	E440/VA	1.0	mg/kg	1390	607	934	841	775



## Analytical Results

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

					Client sample ID	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-2 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-3 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-4 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24 ----
					Client sampling date / time	24-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5885-001	VA25C5885-002	VA25C5885-003	VA25C5885-004	VA25C5885-005	
					Result	Result	Result	Result	Result	
<b>Metals</b>										
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	16.1	13.7	18.6	17.5	16.4	
Nickel	7440-02-0	E440/VA	0.50	mg/kg	645	141	228	98.9	131	
Phosphorus	7723-14-0	E440/VA	50	mg/kg	11400	11000	13000	12300	10500	
Potassium	7440-09-7	E440/VA	100	mg/kg	5570	6440	5850	5940	5600	
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.34	0.34	0.38	0.36	0.44	
Silver	7440-22-4	E440/VA	0.10	mg/kg	2.69	3.86	7.09	16.4	7.78	
Sodium	7440-23-5	E440/VA	50	mg/kg	14900	17200	15500	16700	14500	
Strontium	7440-24-6	E440/VA	0.50	mg/kg	284	348	324	280	350	
Sulfur	7704-34-9	E440/VA	1000	mg/kg	10400	11700	11200	10100	10800	
Thallium	7440-28-0	E440/VA	0.050	mg/kg	<0.050	0.054	<0.050	<0.050	<0.050	
Tin	7440-31-5	E440/VA	2.0	mg/kg	89.3	157	120	83.3	132	
Titanium	7440-32-6	E440/VA	1.0	mg/kg	314	703	300	323	405	
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	15.0	16.0	22.8	14.3	16.5	
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.65	1.61	1.88	1.59	1.62	
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	28.0	33.3	32.2	28.3	31.7	
Zinc	7440-66-6	E440/VA	2.0	mg/kg	2780	14600	2800	3380	3040	
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	2.7	3.2	3.7	7.3	3.4	
<b>TCLP Metals</b>										
pH, TCLP 1st preliminary	---	EPP444/VA	0.010	pH units	12.06	12.09	12.06	12.11	12.12	



**Analytical Results**

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

					Client sample ID				
					BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-2 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-3 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-4 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24 ----
Client sampling date / time					24-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5885-001	VA25C5885-002	VA25C5885-003	VA25C5885-004	VA25C5885-005
					Result	Result	Result	Result	Result
<b>TCLP Metals</b>									
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	6.28	6.41	6.20	5.95	6.45
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	2.90	2.90	2.90	2.90	2.90
pH, TCLP final	----	EPP444/VA	0.010	pH units	6.17	5.99	6.19	6.30	6.44
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	1.79	1.98	2.04	2.25	1.86
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L	0.100	0.147	0.122	0.096	0.127
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L	1700	1630	1650	1620	1700
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	1.10	0.875	0.925	1.56	1.58
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L	1.71	2.75	0.835	0.784	1.13
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	0.32	<0.25	<0.25	<0.25	<0.25
Magnesium, TCLP	7439-95-4	E444/VA	2.5	mg/L	113	117	119	125	122
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	0.50	0.36	0.48	0.41	0.33
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



### Analytical Results

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

					Client sample ID	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-2 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-3 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-4 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24 ----
					Client sampling date / time	24-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5885-001	VA25C5885-002	VA25C5885-003	VA25C5885-004	VA25C5885-005	
					Result	Result	Result	Result	Result	
<b>TCLP Metals</b>										
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	28.1	37.7	22.2	24.3	14.7	
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)

					Client sample ID	BA 25-39-A-6 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-7 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-8 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-10 UNPROCESSED Sept 21 to Sept 24 ----
					Client sampling date / time	24-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5885-006	VA25C5885-007	VA25C5885-008	VA25C5885-009	VA25C5885-010	
					Result	Result	Result	Result	Result	
<b>Physical Tests</b>										
Moisture	----	E144/VA	0.25	%	27.5	28.6	23.0	22.0	23.6	
pH (1:2 soil:water)	----	E108/VA	0.10	pH units	12.24	12.24	11.98	11.98	12.15	
<b>Metals</b>										
Aluminum	7429-90-5	E440/VA	50	mg/kg	43200	44000	41400	31800	34500	
Antimony	7440-36-0	E440/VA	0.10	mg/kg	76.2	70.5	81.6	80.9	83.0	
Arsenic	7440-38-2	E440/VA	0.10	mg/kg	17.4	14.2	13.9	15.4	13.8	
Barium	7440-39-3	E440/VA	0.50	mg/kg	657	617	608	650	574	



## Analytical Results

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

					Client sample ID				
					BA 25-39-A-6 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-7 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-8 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-10 UNPROCESSED Sept 21 to Sept 24 ----
Client sampling date / time					24-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5885-006	VA25C5885-007	VA25C5885-008	VA25C5885-009	VA25C5885-010
					Result	Result	Result	Result	Result
<b>Metals</b>									
Beryllium	7440-41-7	E440/VA	0.10	mg/kg	0.31	0.39	0.38	0.36	0.35
Bismuth	7440-69-9	E440/VA	0.20	mg/kg	20.4	19.0	13.2	16.6	14.3
Boron	7440-42-8	E440/VA	5.0	mg/kg	178	190	178	292	212
Cadmium	7440-43-9	E440/VA	0.020	mg/kg	6.85	6.21	7.46	7.67	9.31
Calcium	7440-70-2	E440/VA	50	mg/kg	128000	119000	128000	135000	130000
Chromium	7440-47-3	E440/VA	0.50	mg/kg	190	265	137	118	115
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	173	78.8	226	49.1	92.1
Copper	7440-50-8	E440/VA	0.50	mg/kg	2040	2760	3260	7900	3790
Iron	7439-89-6	E440/VA	50	mg/kg	64800	55600	47800	48000	50700
Lead	7439-92-1	E440/VA	0.50	mg/kg	349	457	404	344	969
Lithium	7439-93-2	E440/VA	2.0	mg/kg	31.7	29.9	82.7	29.3	31.6
Magnesium	7439-95-4	E440/VA	20	mg/kg	11900	11300	12200	12600	11800
Manganese	7439-96-5	E440/VA	1.0	mg/kg	672	1100	746	713	661
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	18.0	16.4	13.6	15.8	15.8
Nickel	7440-02-0	E440/VA	0.50	mg/kg	106	559	121	174	203
Phosphorus	7723-14-0	E440/VA	50	mg/kg	12000	11600	11100	11300	11400
Potassium	7440-09-7	E440/VA	100	mg/kg	5120	4820	5590	5770	5390
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.34	0.40	0.40	0.34	0.36
Silver	7440-22-4	E440/VA	0.10	mg/kg	16.5	2.54	3.41	4.27	3.49



## Analytical Results

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

					Client sample ID				
					BA 25-39-A-6 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-7 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-8 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-10 UNPROCESSED Sept 21 to Sept 24 ----
Client sampling date / time					24-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5885-006	VA25C5885-007	VA25C5885-008	VA25C5885-009	VA25C5885-010
					Result	Result	Result	Result	Result
<b>Metals</b>									
Sodium	7440-23-5	E440/VA	50	mg/kg	14300	14900	15000	15600	14300
Strontium	7440-24-6	E440/VA	0.50	mg/kg	311	248	307	319	273
Sulfur	7704-34-9	E440/VA	1000	mg/kg	10400	9200	10400	12400	11000
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	335	76.5	105	91.2	104
Titanium	7440-32-6	E440/VA	1.0	mg/kg	272	307	280	273	206
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	18.2	13.8	17.2	17.3	15.5
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.54	1.51	1.60	1.52	1.56
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	30.5	37.3	31.7	31.1	28.5
Zinc	7440-66-6	E440/VA	2.0	mg/kg	2900	11000	3410	4320	2810
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	4.0	3.2	4.0	2.2	3.7
<b>TCLP Metals</b>									
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units	12.13	12.12	12.06	12.03	12.09
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	5.98	6.08	5.17	4.53	4.70
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	2.90	2.90	2.90	4.96	4.96
pH, TCLP final	----	EPP444/VA	0.010	pH units	6.35	6.56	6.20	10.27	10.29
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



**Analytical Results**

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

					Client sample ID				
					BA 25-39-A-6 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-7 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-8 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-10 UNPROCESSED Sept 21 to Sept 24 ----
Client sampling date / time					24-Sep-2025 00:00				
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5885-006	VA25C5885-007	VA25C5885-008	VA25C5885-009	VA25C5885-010
					Result	Result	Result	Result	Result
<b>TCLP Metals</b>									
Boron, TCLP	7440-42-8	E444/VA	0.50	mg/L	2.08	1.71	1.82	0.53	0.72
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L	0.096	0.067	0.115	<0.050	<0.050
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L	1690	1680	1710	657	677
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	0.886	1.90	0.990	<0.050	<0.050
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L	1.08	1.20	0.795	0.955	1.11
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	122	119	118	<2.5	<2.5
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	0.36	0.41	0.51	<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
Zinc, TCLP	7440-66-6	E444/VA	0.50	mg/L	14.8	13.8	24.7	<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)

					Client sample ID		BA 25-39-A-11 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-12 UNPROCESSED Sept 21 to Sept 24 ----	----	----	----
					Client sampling date / time		24-Sep-2025 00:00	24-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5885-011	VA25C5885-012	----	----	----	----	----
					Result	Result	----	----	----	----	----
<b>Physical Tests</b>											
Moisture	----	E144/VA	0.25	%	26.7	25.8	----	----	----	----	----
pH (1:2 soil:water)	----	E108/VA	0.10	pH units	12.24	12.16	----	----	----	----	----
<b>Metals</b>											
Aluminum	7429-90-5	E440/VA	50	mg/kg	31300	32700	----	----	----	----	----
Antimony	7440-36-0	E440/VA	0.10	mg/kg	67.2	80.2	----	----	----	----	----
Arsenic	7440-38-2	E440/VA	0.10	mg/kg	14.9	15.5	----	----	----	----	----
Barium	7440-39-3	E440/VA	0.50	mg/kg	690	618	----	----	----	----	----
Beryllium	7440-41-7	E440/VA	0.10	mg/kg	0.34	0.35	----	----	----	----	----
Bismuth	7440-69-9	E440/VA	0.20	mg/kg	39.5	30.3	----	----	----	----	----
Boron	7440-42-8	E440/VA	5.0	mg/kg	162	146	----	----	----	----	----
Cadmium	7440-43-9	E440/VA	0.020	mg/kg	29.6	8.52	----	----	----	----	----
Calcium	7440-70-2	E440/VA	50	mg/kg	135000	141000	----	----	----	----	----
Chromium	7440-47-3	E440/VA	0.50	mg/kg	159	151	----	----	----	----	----
Cobalt	7440-48-4	E440/VA	0.10	mg/kg	276	36.0	----	----	----	----	----
Copper	7440-50-8	E440/VA	0.50	mg/kg	3070	7560	----	----	----	----	----
Iron	7439-89-6	E440/VA	50	mg/kg	67300	36300	----	----	----	----	----
Lead	7439-92-1	E440/VA	0.50	mg/kg	343	516	----	----	----	----	----
Lithium	7439-93-2	E440/VA	2.0	mg/kg	59.9	37.7	----	----	----	----	----
Magnesium	7439-95-4	E440/VA	20	mg/kg	12200	12600	----	----	----	----	----
Manganese	7439-96-5	E440/VA	1.0	mg/kg	919	572	----	----	----	----	----



### Analytical Results

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

					Client sample ID		----	----	----		
					BA 25-39-A-11 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-12 UNPROCESSED Sept 21 to Sept 24 ----					
					Client sampling date / time		24-Sep-2025 00:00	24-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5885-011	VA25C5885-012	----	----	----		
					Result	Result	----	----	----		
<b>Metals</b>											
Mercury	7439-97-6	E510/VA	0.0500	mg/kg	<0.0500	<0.0500	----	----	----		
Molybdenum	7439-98-7	E440/VA	0.10	mg/kg	25.6	13.7	----	----	----		
Nickel	7440-02-0	E440/VA	0.50	mg/kg	274	159	----	----	----		
Phosphorus	7723-14-0	E440/VA	50	mg/kg	11700	13300	----	----	----		
Potassium	7440-09-7	E440/VA	100	mg/kg	5260	5490	----	----	----		
Selenium	7782-49-2	E440/VA	0.20	mg/kg	0.30	0.41	----	----	----		
Silver	7440-22-4	E440/VA	0.10	mg/kg	3.85	3.76	----	----	----		
Sodium	7440-23-5	E440/VA	50	mg/kg	14200	15000	----	----	----		
Strontium	7440-24-6	E440/VA	0.50	mg/kg	284	314	----	----	----		
Sulfur	7704-34-9	E440/VA	1000	mg/kg	10500	12200	----	----	----		
Thallium	7440-28-0	E440/VA	0.050	mg/kg	<0.050	<0.050	----	----	----		
Tin	7440-31-5	E440/VA	2.0	mg/kg	101	357	----	----	----		
Titanium	7440-32-6	E440/VA	1.0	mg/kg	231	236	----	----	----		
Tungsten	7440-33-7	E440/VA	0.50	mg/kg	18.5	20.9	----	----	----		
Uranium	7440-61-1	E440/VA	0.050	mg/kg	1.53	1.72	----	----	----		
Vanadium	7440-62-2	E440/VA	0.20	mg/kg	28.8	32.2	----	----	----		
Zinc	7440-66-6	E440/VA	2.0	mg/kg	3660	3000	----	----	----		
Zirconium	7440-67-7	E440/VA	1.0	mg/kg	4.5	4.7	----	----	----		
<b>TCLP Metals</b>											
pH, TCLP 1st preliminary	----	EPP444/VA	0.010	pH units	12.12	12.13	----	----	----		



**Analytical Results**

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

					Client sample ID		----	----	----		
					BA 25-39-A-11 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-12 UNPROCESSED Sept 21 to Sept 24 ----					
					Client sampling date / time		24-Sep-2025 00:00	24-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5885-011	VA25C5885-012	----	----	----		
					Result	Result	----	----	----		
<b>TCLP Metals</b>											
pH, TCLP 2nd preliminary	----	EPP444/VA	0.010	pH units	5.65	5.97	----	----	----		
pH, TCLP extraction fluid initial	----	EPP444/VA	0.010	pH units	2.90	2.90	----	----	----		
pH, TCLP final	----	EPP444/VA	0.010	pH units	6.26	6.11	----	----	----		
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	----	----	----		
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	2.07	5.09	----	----	----		
Cadmium, TCLP	7440-43-9	E444/VA	0.050	mg/L	0.084	0.120	----	----	----		
Calcium, TCLP	7440-70-2	E444/VA	10	mg/L	1690	1620	----	----	----		
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	0.993	0.916	----	----	----		
Copper, TCLP	7440-50-8	E444/VA	0.050	mg/L	1.35	1.79	----	----	----		
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	119	106	----	----	----		
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	0.34	0.33	----	----	----		
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	----	----	----		



**Analytical Results**

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

					Client sample ID	BA 25-39-A-11 UNPROCESSED Sept 21 to Sept 24 ----	BA 25-39-A-12 UNPROCESSED Sept 21 to Sept 24 ----	----	----	----
					Client sampling date / time	24-Sep-2025 00:00	24-Sep-2025 00:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25C5885-011	VA25C5885-012	----	----	----	----
					Result	Result	----	----	----	----
<b>TCLP Metals</b>										
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	19.3	86.7	----	----	----	----
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.



## QUALITY CONTROL INTERPRETIVE REPORT

<p><b>Work Order</b> : <b>VA25C5885</b></p> <p><b>Client</b> : <b>Veolia Environmental Services Canada</b></p> <p><b>Contact</b> : Brian Graham</p> <p><b>Address</b> : 5150 Riverbend Dr. Burnaby BC Canada V3N 4V3</p> <p><b>Telephone</b> : ----</p> <p><b>Project</b> : Veolia Weekly Bottom Ash-Suite</p> <p><b>PO</b> : 1000497676</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : Metro Van Ash Sampling Program</p> <p><b>Quote number</b> : VA25-VIS1100-001</p> <p><b>No. of samples received</b> : 12</p> <p><b>No. of samples analysed</b> : 12</p>	<p><b>Page</b> : 1 of 17</p> <p><b>Laboratory</b> : ALS Environmental - Vancouver</p> <p><b>Account Manager</b> : Gulraj Dhanaua</p> <p><b>Address</b> : 8081 Lougheed Highway Burnaby, British Columbia Canada V5A 1W9</p> <p><b>Telephone</b> : +1 604 253 4188</p> <p><b>Date Samples Received</b> : 01-Oct-2025 12:15</p> <p><b>Issue Date</b> : 09-Oct-2025 08:55</p>
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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

- Reference Material (RM) Sample outliers occur - please see the following pages for full details.

### ***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
<b>Duplicate (DUP) RPDs</b>								
Metals	VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	Antimony	7440-36-0	E440	53.3 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Bismuth	7440-69-9	E440	45.8 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Boron	7440-42-8	E440	50.2 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Cadmium	7440-43-9	E440	38.0 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	Cobalt	7440-48-4	E440	140 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Cobalt	7440-48-4	E440	38.3 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	Copper	7440-50-8	E440	41.7 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Copper	7440-50-8	E440	85.4 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Lead	7439-92-1	E440	47.6 % DUP-H	40%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Lithium	7439-93-2	E440	93.0 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	Manganese	7439-96-5	E440	60.5 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	Nickel	7440-02-0	E440	72.6 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Nickel	7440-02-0	E440	45.8 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.



Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Duplicate (DUP) RPDs - Continued</b>								
Metals	VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Silver	7440-22-4	E440	150 % DUP-H	40%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Titanium	7440-32-6	E440	40.7 % DUP-H	40%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	Zinc	7440-66-6	E440	150 % DUP-H	30%	Duplicate RPD does not meet the DQO for this test.
Metals	VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Zinc	7440-66-6	E440	47.2 % 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.

Reference Material (RM) Sample								
Metals	QC-MRG2-2261516 003	----	Bismuth	7440-69-9	E440	145 % RRQC	70.0-130%	Recovery greater than upper control limit
Metals	QC-MRG2-2261525 003	----	Bismuth	7440-69-9	E440	133 % MES	70.0-130%	Recovery greater than upper control limit

**Result Qualifiers**

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
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		
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
<b>LDPE bag</b> BA 25-39-A-10 UNPROCESSED Sept 21 to Sept 24	E510	24-Sep-2025	07-Oct-2025	28 days	14 days	✔	07-Oct-2025	28 days	0 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
<b>LDPE bag</b> BA 25-39-A-11 UNPROCESSED Sept 21 to Sept 24	E510	24-Sep-2025	07-Oct-2025	28 days	14 days	✔	07-Oct-2025	28 days	0 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
<b>LDPE bag</b> BA 25-39-A-12 UNPROCESSED Sept 21 to Sept 24	E510	24-Sep-2025	07-Oct-2025	28 days	14 days	✔	07-Oct-2025	28 days	0 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
<b>LDPE bag</b> BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	E510	24-Sep-2025	07-Oct-2025	28 days	14 days	✔	07-Oct-2025	28 days	0 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
<b>LDPE bag</b> BA 25-39-A-6 UNPROCESSED Sept 21 to Sept 24	E510	24-Sep-2025	07-Oct-2025	28 days	14 days	✔	07-Oct-2025	28 days	0 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
<b>LDPE bag</b> BA 25-39-A-7 UNPROCESSED Sept 21 to Sept 24	E510	24-Sep-2025	07-Oct-2025	28 days	14 days	✔	07-Oct-2025	28 days	0 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
<b>LDPE bag</b> BA 25-39-A-8 UNPROCESSED Sept 21 to Sept 24	E510	24-Sep-2025	07-Oct-2025	28 days	14 days	✔	07-Oct-2025	28 days	0 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	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24	E510	24-Sep-2025	07-Oct-2025	28 days	14 days	✔	07-Oct-2025	28 days	0 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	E510	24-Sep-2025	07-Oct-2025	28 days	14 days	✔	08-Oct-2025	28 days	1 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 25-39-A-2 UNPROCESSED Sept 21 to Sept 24	E510	24-Sep-2025	07-Oct-2025	28 days	14 days	✔	08-Oct-2025	28 days	1 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 25-39-A-3 UNPROCESSED Sept 21 to Sept 24	E510	24-Sep-2025	07-Oct-2025	28 days	14 days	✔	08-Oct-2025	28 days	1 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
<b>LDPE bag</b> BA 25-39-A-4 UNPROCESSED Sept 21 to Sept 24	E510	24-Sep-2025	07-Oct-2025	28 days	14 days	✔	08-Oct-2025	28 days	1 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>										
<b>LDPE bag</b> BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	E440	24-Sep-2025	07-Oct-2025	180 days	14 days	✔	08-Oct-2025	180 days	14 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>										
<b>LDPE bag</b> BA 25-39-A-10 UNPROCESSED Sept 21 to Sept 24	E440	24-Sep-2025	07-Oct-2025	180 days	14 days	✔	08-Oct-2025	180 days	14 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>										
<b>LDPE bag</b> BA 25-39-A-11 UNPROCESSED Sept 21 to Sept 24	E440	24-Sep-2025	07-Oct-2025	180 days	14 days	✔	08-Oct-2025	180 days	14 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>										
<b>LDPE bag</b> BA 25-39-A-12 UNPROCESSED Sept 21 to Sept 24	E440	24-Sep-2025	07-Oct-2025	180 days	14 days	✔	08-Oct-2025	180 days	14 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		
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 25-39-A-2 UNPROCESSED Sept 21 to Sept 24	E440	24-Sep-2025	07-Oct-2025	180 days	14 days	✓	08-Oct-2025	180 days	14 days	✓	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 25-39-A-3 UNPROCESSED Sept 21 to Sept 24	E440	24-Sep-2025	07-Oct-2025	180 days	14 days	✓	08-Oct-2025	180 days	14 days	✓	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 25-39-A-4 UNPROCESSED Sept 21 to Sept 24	E440	24-Sep-2025	07-Oct-2025	180 days	14 days	✓	08-Oct-2025	180 days	14 days	✓	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	E440	24-Sep-2025	07-Oct-2025	180 days	14 days	✓	08-Oct-2025	180 days	14 days	✓	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 25-39-A-6 UNPROCESSED Sept 21 to Sept 24	E440	24-Sep-2025	07-Oct-2025	180 days	14 days	✓	08-Oct-2025	180 days	14 days	✓	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 25-39-A-7 UNPROCESSED Sept 21 to Sept 24	E440	24-Sep-2025	07-Oct-2025	180 days	14 days	✓	08-Oct-2025	180 days	14 days	✓	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 25-39-A-8 UNPROCESSED Sept 21 to Sept 24	E440	24-Sep-2025	07-Oct-2025	180 days	14 days	✓	08-Oct-2025	180 days	14 days	✓	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
<b>LDPE bag</b> BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24	E440	24-Sep-2025	07-Oct-2025	180 days	14 days	✓	08-Oct-2025	180 days	14 days	✓	
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	E144	24-Sep-2025	----	----	----		06-Oct-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		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 25-39-A-10 UNPROCESSED Sept 21 to Sept 24	E144	24-Sep-2025	----	----	----		06-Oct-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 25-39-A-11 UNPROCESSED Sept 21 to Sept 24	E144	24-Sep-2025	----	----	----		06-Oct-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 25-39-A-12 UNPROCESSED Sept 21 to Sept 24	E144	24-Sep-2025	----	----	----		06-Oct-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 25-39-A-2 UNPROCESSED Sept 21 to Sept 24	E144	24-Sep-2025	----	----	----		06-Oct-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 25-39-A-3 UNPROCESSED Sept 21 to Sept 24	E144	24-Sep-2025	----	----	----		06-Oct-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 25-39-A-4 UNPROCESSED Sept 21 to Sept 24	E144	24-Sep-2025	----	----	----		06-Oct-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	E144	24-Sep-2025	----	----	----		06-Oct-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 25-39-A-6 UNPROCESSED Sept 21 to Sept 24	E144	24-Sep-2025	----	----	----		06-Oct-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 25-39-A-7 UNPROCESSED Sept 21 to Sept 24	E144	24-Sep-2025	----	----	----		06-Oct-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		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 25-39-A-8 UNPROCESSED Sept 21 to Sept 24	E144	24-Sep-2025	----	----	----		06-Oct-2025	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
<b>LDPE bag</b> BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24	E144	24-Sep-2025	----	----	----		06-Oct-2025	----	----		
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	E108	24-Sep-2025	07-Oct-2025	30 days	14 days	✔	08-Oct-2025	30 days	14 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 25-39-A-10 UNPROCESSED Sept 21 to Sept 24	E108	24-Sep-2025	07-Oct-2025	30 days	14 days	✔	07-Oct-2025	30 days	14 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 25-39-A-11 UNPROCESSED Sept 21 to Sept 24	E108	24-Sep-2025	07-Oct-2025	30 days	14 days	✔	07-Oct-2025	30 days	14 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 25-39-A-12 UNPROCESSED Sept 21 to Sept 24	E108	24-Sep-2025	07-Oct-2025	30 days	14 days	✔	07-Oct-2025	30 days	14 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 25-39-A-2 UNPROCESSED Sept 21 to Sept 24	E108	24-Sep-2025	07-Oct-2025	30 days	14 days	✔	08-Oct-2025	30 days	14 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 25-39-A-3 UNPROCESSED Sept 21 to Sept 24	E108	24-Sep-2025	07-Oct-2025	30 days	14 days	✔	08-Oct-2025	30 days	14 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 25-39-A-4 UNPROCESSED Sept 21 to Sept 24	E108	24-Sep-2025	07-Oct-2025	30 days	14 days	✔	08-Oct-2025	30 days	14 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		
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	E108	24-Sep-2025	07-Oct-2025	30 days	14 days	✔	07-Oct-2025	30 days	14 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 25-39-A-6 UNPROCESSED Sept 21 to Sept 24	E108	24-Sep-2025	07-Oct-2025	30 days	14 days	✔	07-Oct-2025	30 days	14 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 25-39-A-7 UNPROCESSED Sept 21 to Sept 24	E108	24-Sep-2025	07-Oct-2025	30 days	14 days	✔	07-Oct-2025	30 days	14 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 25-39-A-8 UNPROCESSED Sept 21 to Sept 24	E108	24-Sep-2025	07-Oct-2025	30 days	14 days	✔	07-Oct-2025	30 days	14 days	✔	
<b>Physical Tests : pH by Meter (1:2 Soil:Water Extraction)</b>											
<b>LDPE bag</b> BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24	E108	24-Sep-2025	07-Oct-2025	30 days	14 days	✔	07-Oct-2025	30 days	14 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	E512	02-Oct-2025	03-Oct-2025	37 days	10 days	✔	03-Oct-2025	37 days	10 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 25-39-A-10 UNPROCESSED Sept 21 to Sept 24	E512	02-Oct-2025	03-Oct-2025	37 days	10 days	✔	03-Oct-2025	37 days	10 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 25-39-A-11 UNPROCESSED Sept 21 to Sept 24	E512	02-Oct-2025	03-Oct-2025	37 days	10 days	✔	03-Oct-2025	37 days	10 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 25-39-A-12 UNPROCESSED Sept 21 to Sept 24	E512	02-Oct-2025	03-Oct-2025	37 days	10 days	✔	03-Oct-2025	37 days	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		
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 25-39-A-2 UNPROCESSED Sept 21 to Sept 24	E512	02-Oct-2025	03-Oct-2025	37 days	10 days	✔	03-Oct-2025	37 days	10 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 25-39-A-3 UNPROCESSED Sept 21 to Sept 24	E512	02-Oct-2025	03-Oct-2025	37 days	10 days	✔	03-Oct-2025	37 days	10 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 25-39-A-4 UNPROCESSED Sept 21 to Sept 24	E512	02-Oct-2025	03-Oct-2025	37 days	10 days	✔	03-Oct-2025	37 days	10 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	E512	02-Oct-2025	03-Oct-2025	37 days	10 days	✔	03-Oct-2025	37 days	10 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 25-39-A-6 UNPROCESSED Sept 21 to Sept 24	E512	02-Oct-2025	03-Oct-2025	37 days	10 days	✔	03-Oct-2025	37 days	10 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 25-39-A-7 UNPROCESSED Sept 21 to Sept 24	E512	02-Oct-2025	03-Oct-2025	37 days	10 days	✔	03-Oct-2025	37 days	10 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 25-39-A-8 UNPROCESSED Sept 21 to Sept 24	E512	02-Oct-2025	03-Oct-2025	37 days	10 days	✔	03-Oct-2025	37 days	10 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
<b>Glass vial - total (lab preserved)</b> BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24	E512	02-Oct-2025	03-Oct-2025	37 days	10 days	✔	03-Oct-2025	37 days	10 days	✔	
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>											
<b>HDPE - total (lab preserved)</b> BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	E444	02-Oct-2025	03-Oct-2025	189 days	10 days	✔	04-Oct-2025	189 days	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	
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>										
HDPE - total (lab preserved) BA 25-39-A-10 UNPROCESSED Sept 21 to Sept 24	E444	02-Oct-2025	03-Oct-2025	189 days	10 days	✔	04-Oct-2025	189 days	10 days	✔
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>										
HDPE - total (lab preserved) BA 25-39-A-11 UNPROCESSED Sept 21 to Sept 24	E444	02-Oct-2025	03-Oct-2025	189 days	10 days	✔	04-Oct-2025	189 days	10 days	✔
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>										
HDPE - total (lab preserved) BA 25-39-A-12 UNPROCESSED Sept 21 to Sept 24	E444	02-Oct-2025	03-Oct-2025	189 days	10 days	✔	04-Oct-2025	189 days	10 days	✔
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>										
HDPE - total (lab preserved) BA 25-39-A-2 UNPROCESSED Sept 21 to Sept 24	E444	02-Oct-2025	03-Oct-2025	189 days	10 days	✔	04-Oct-2025	189 days	10 days	✔
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>										
HDPE - total (lab preserved) BA 25-39-A-3 UNPROCESSED Sept 21 to Sept 24	E444	02-Oct-2025	03-Oct-2025	189 days	10 days	✔	04-Oct-2025	189 days	10 days	✔
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>										
HDPE - total (lab preserved) BA 25-39-A-4 UNPROCESSED Sept 21 to Sept 24	E444	02-Oct-2025	03-Oct-2025	189 days	10 days	✔	04-Oct-2025	189 days	10 days	✔
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>										
HDPE - total (lab preserved) BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	E444	02-Oct-2025	03-Oct-2025	189 days	10 days	✔	04-Oct-2025	189 days	10 days	✔
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>										
HDPE - total (lab preserved) BA 25-39-A-6 UNPROCESSED Sept 21 to Sept 24	E444	02-Oct-2025	03-Oct-2025	189 days	10 days	✔	04-Oct-2025	189 days	10 days	✔
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>										
HDPE - total (lab preserved) BA 25-39-A-7 UNPROCESSED Sept 21 to Sept 24	E444	02-Oct-2025	03-Oct-2025	189 days	10 days	✔	04-Oct-2025	189 days	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		
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>											
<b>HDPE - total (lab preserved)</b> BA 25-39-A-8 UNPROCESSED Sept 21 to Sept 24	E444	02-Oct-2025	03-Oct-2025	189 days	10 days	✓	04-Oct-2025	189 days	10 days	✓	
<b>TCLP Metals : Metals by CRC ICPMS (TCLP)</b>											
<b>HDPE - total (lab preserved)</b> BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24	E444	02-Oct-2025	03-Oct-2025	189 days	10 days	✓	04-Oct-2025	189 days	10 days	✓	
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>											
<b>Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)</b> BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	EPP444	24-Sep-2025	02-Oct-2025	----	----		----	28 days	9 days	✓	
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>											
<b>Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)</b> BA 25-39-A-10 UNPROCESSED Sept 21 to Sept 24	EPP444	24-Sep-2025	02-Oct-2025	----	----		----	28 days	9 days	✓	
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>											
<b>Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)</b> BA 25-39-A-11 UNPROCESSED Sept 21 to Sept 24	EPP444	24-Sep-2025	02-Oct-2025	----	----		----	28 days	9 days	✓	
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>											
<b>Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)</b> BA 25-39-A-12 UNPROCESSED Sept 21 to Sept 24	EPP444	24-Sep-2025	02-Oct-2025	----	----		----	28 days	9 days	✓	
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>											
<b>Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)</b> BA 25-39-A-2 UNPROCESSED Sept 21 to Sept 24	EPP444	24-Sep-2025	02-Oct-2025	----	----		----	28 days	9 days	✓	
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>											
<b>Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)</b> BA 25-39-A-3 UNPROCESSED Sept 21 to Sept 24	EPP444	24-Sep-2025	02-Oct-2025	----	----		----	28 days	9 days	✓	
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>											
<b>Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)</b> BA 25-39-A-4 UNPROCESSED Sept 21 to Sept 24	EPP444	24-Sep-2025	02-Oct-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	
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
<b>Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)</b> BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	EPP444	24-Sep-2025	02-Oct-2025	----	----		----	28 days	9 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
<b>Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)</b> BA 25-39-A-6 UNPROCESSED Sept 21 to Sept 24	EPP444	24-Sep-2025	02-Oct-2025	----	----		----	28 days	9 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
<b>Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)</b> BA 25-39-A-7 UNPROCESSED Sept 21 to Sept 24	EPP444	24-Sep-2025	02-Oct-2025	----	----		----	28 days	9 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
<b>Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)</b> BA 25-39-A-8 UNPROCESSED Sept 21 to Sept 24	EPP444	24-Sep-2025	02-Oct-2025	----	----		----	28 days	9 days	✔
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>										
<b>Lab Split - Non-Volatile Leach: 28 day HT (e.g. Hg, CrVI, PFAS)</b> BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24	EPP444	24-Sep-2025	02-Oct-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
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
pH by Meter (1:2 Soil:Water Extraction)	E108	2261527	2	40	5.0	5.0	✔
Moisture Content by Gravimetry	E144	2261528	2	24	8.3	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	2261525	2	39	5.1	5.0	✔
Metals by CRC ICPMS (TCLP)	E444	2257506	2	12	16.6	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	2261526	2	40	5.0	5.0	✔
Mercury by CVAAS (TCLP)	E512	2257503	2	12	16.6	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
pH by Meter (1:2 Soil:Water Extraction)	E108	2261527	2	40	5.0	5.0	✔
Moisture Content by Gravimetry	E144	2261528	2	24	8.3	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	2261525	4	39	10.2	10.0	✔
Mercury in Soil/Solid by CVAAS	E510	2261526	4	40	10.0	10.0	✔
<b>Method Blanks (MB)</b>							
Moisture Content by Gravimetry	E144	2261528	2	24	8.3	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	2261525	2	39	5.1	5.0	✔
Metals by CRC ICPMS (TCLP)	E444	2257506	2	12	16.6	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	2261526	2	40	5.0	5.0	✔
Mercury by CVAAS (TCLP)	E512	2257502	2	12	16.6	5.0	✔
<b>Matrix Spikes (MS)</b>							
Metals by CRC ICPMS (TCLP)	E444	2257506	2	12	16.6	5.0	✔
Mercury by CVAAS (TCLP)	E512	2257502	2	12	16.6	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 $105^{\circ}\text{C}$ . 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 $\text{HNO}_3$ and $\text{HCl}$ .  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 $\text{HNO}_3$ and $\text{HCl}$ , 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.



<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
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 <sub>3</sub> 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

<b>Work Order</b>	<b>: VA25C5885</b>	<b>Page</b>	: 1 of 19
<b>Client</b>	: Veolia Environmental Services Canada	<b>Laboratory</b>	: ALS Environmental - Vancouver
<b>Contact</b>	: Brian Graham	<b>Account Manager</b>	: Gulraj Dhanaua
<b>Address</b>	: 5150 Riverbend Dr. Burnaby BC Canada V3N 4V3	<b>Address</b>	: 8081 Lougheed Highway Burnaby, British Columbia Canada V5A 1W9
<b>Telephone</b>	: ----	<b>Telephone</b>	: +1 604 253 4188
<b>Project</b>	: Veolia Weekly Bottom Ash-Suite	<b>Date Samples Received</b>	: 01-Oct-2025 12:15
<b>PO</b>	: 1000497676	<b>Date Analysis Commenced</b>	: 02-Oct-2025
<b>C-O-C number</b>	: ----	<b>Issue Date</b>	: 09-Oct-2025 08:55
<b>Sampler</b>	: ----		
<b>Site</b>	: Metro Van Ash Sampling Program		
<b>Quote number</b>	: VA25-VISI100-001		
<b>No. of samples received</b>	: 12		
<b>No. of samples analysed</b>	: 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.

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



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## 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

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

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### 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
<b>Physical Tests (QC Lot: 2261518)</b>											
VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	pH (1:2 soil:water)	----	E108	0.10	pH units	11.41	11.43	0.2%	5%	----
<b>Physical Tests (QC Lot: 2261519)</b>											
VA25C5885-002	BA 25-39-A-2 UNPROCESSED Sept 21 to Sept 24	Moisture	----	E144	0.25	%	24.3	24.7	1.74%	20%	----
<b>Physical Tests (QC Lot: 2261527)</b>											
VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	pH (1:2 soil:water)	----	E108	0.10	pH units	12.00	11.92	0.7%	5%	----
<b>Physical Tests (QC Lot: 2261528)</b>											
VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Moisture	----	E144	0.25	%	28.2	27.9	0.851%	20%	----
<b>Metals (QC Lot: 2261516)</b>											
VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	Aluminum	7429-90-5	E440	50	mg/kg	32800	36500	10.6%	40%	----
		Antimony	7440-36-0	E440	0.10	mg/kg	129	74.8	53.3%	30%	DUP-H
		Arsenic	7440-38-2	E440	0.10	mg/kg	12.1	15.3	22.9%	30%	----
		Barium	7440-39-3	E440	0.50	mg/kg	558	605	8.10%	40%	----
		Beryllium	7440-41-7	E440	0.10	mg/kg	0.37	0.48	0.11	Diff <2x LOR	----
		Bismuth	7440-69-9	E440	0.20	mg/kg	10.6	12.0	12.2%	30%	----
		Boron	7440-42-8	E440	5.0	mg/kg	209	194	7.56%	30%	----
		Cadmium	7440-43-9	E440	0.020	mg/kg	7.15	7.72	7.76%	30%	----
		Calcium	7440-70-2	E440	50	mg/kg	124000	124000	0.664%	30%	----
		Chromium	7440-47-3	E440	0.50	mg/kg	143	130	9.21%	30%	----
		Cobalt	7440-48-4	E440	0.10	mg/kg	162	927	140%	30%	DUP-H
		Copper	7440-50-8	E440	0.50	mg/kg	1560	2380	41.7%	30%	DUP-H
		Iron	7439-89-6	E440	50	mg/kg	43800	56100	24.6%	30%	----
		Lead	7439-92-1	E440	0.50	mg/kg	329	340	3.50%	40%	----
		Lithium	7439-93-2	E440	2.0	mg/kg	47.2	43.8	7.39%	30%	----
		Magnesium	7439-95-4	E440	20	mg/kg	11300	12900	13.1%	30%	----
		Manganese	7439-96-5	E440	1.0	mg/kg	1390	746	60.5%	30%	DUP-H



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
<b>Metals (QC Lot: 2261516) - continued</b>											
VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	Molybdenum	7439-98-7	E440	0.10	mg/kg	16.1	15.3	5.61%	40%	----
		Nickel	7440-02-0	E440	0.50	mg/kg	645	302	72.6%	30%	DUP-H
		Phosphorus	7723-14-0	E440	50	mg/kg	11400	10600	6.86%	30%	----
		Potassium	7440-09-7	E440	100	mg/kg	5570	5720	2.69%	40%	----
		Selenium	7782-49-2	E440	0.20	mg/kg	0.34	0.35	0.01	Diff <2x LOR	----
		Silver	7440-22-4	E440	0.10	mg/kg	2.69	3.16	16.2%	40%	----
		Sodium	7440-23-5	E440	50	mg/kg	14900	14600	1.58%	40%	----
		Strontium	7440-24-6	E440	0.50	mg/kg	284	294	3.32%	40%	----
		Sulfur	7704-34-9	E440	1000	mg/kg	10400	10400	0.482%	30%	----
		Thallium	7440-28-0	E440	0.050	mg/kg	<0.050	0.133	0.083	Diff <2x LOR	----
		Tin	7440-31-5	E440	2.0	mg/kg	89.3	102	13.3%	40%	----
		Titanium	7440-32-6	E440	1.0	mg/kg	314	284	10.0%	40%	----
		Tungsten	7440-33-7	E440	0.50	mg/kg	15.0	17.1	13.1%	30%	----
		Uranium	7440-61-1	E440	0.050	mg/kg	1.65	1.51	8.70%	30%	----
		Vanadium	7440-62-2	E440	0.20	mg/kg	28.0	26.3	6.50%	30%	----
		Zinc	7440-66-6	E440	2.0	mg/kg	2780	19400	150%	30%	DUP-H
Zirconium	7440-67-7	E440	1.0	mg/kg	2.7	3.6	0.9	Diff <2x LOR	----		
<b>Metals (QC Lot: 2261517)</b>											
VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	Mercury	7439-97-6	E510	0.0500	mg/kg	<0.0500	<0.0500	0	Diff <2x LOR	----
<b>Metals (QC Lot: 2261525)</b>											
VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Aluminum	7429-90-5	E440	50	mg/kg	48700	33000	38.5%	40%	----
		Antimony	7440-36-0	E440	0.10	mg/kg	68.2	84.1	20.8%	30%	----
		Arsenic	7440-38-2	E440	0.10	mg/kg	13.0	16.6	24.2%	30%	----
		Barium	7440-39-3	E440	0.50	mg/kg	631	630	0.158%	40%	----
		Beryllium	7440-41-7	E440	0.10	mg/kg	0.39	0.38	0.006	Diff <2x LOR	----
		Bismuth	7440-69-9	E440	0.20	mg/kg	13.5	21.5	45.8%	30%	DUP-H
		Boron	7440-42-8	E440	5.0	mg/kg	157	263	50.2%	30%	DUP-H
		Cadmium	7440-43-9	E440	0.020	mg/kg	12.1	8.26	38.0%	30%	DUP-H
		Calcium	7440-70-2	E440	50	mg/kg	123000	142000	14.3%	30%	----
		Chromium	7440-47-3	E440	0.50	mg/kg	146	173	16.8%	30%	----
		Cobalt	7440-48-4	E440	0.10	mg/kg	211	143	38.3%	30%	DUP-H



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
<b>Metals (QC Lot: 2261525) - continued</b>											
VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Copper	7440-50-8	E440	0.50	mg/kg	2890	7210	85.4%	30%	DUP-H
		Iron	7439-89-6	E440	50	mg/kg	69800	55100	23.5%	30%	----
		Lead	7439-92-1	E440	0.50	mg/kg	349	567	47.6%	40%	DUP-H
		Lithium	7439-93-2	E440	2.0	mg/kg	29.8	81.5	93.0%	30%	DUP-H
		Magnesium	7439-95-4	E440	20	mg/kg	12200	12900	5.78%	30%	----
		Manganese	7439-96-5	E440	1.0	mg/kg	775	755	2.65%	30%	----
		Molybdenum	7439-98-7	E440	0.10	mg/kg	16.4	18.3	10.8%	40%	----
		Nickel	7440-02-0	E440	0.50	mg/kg	131	209	45.8%	30%	DUP-H
		Phosphorus	7723-14-0	E440	50	mg/kg	10500	12000	13.5%	30%	----
		Potassium	7440-09-7	E440	100	mg/kg	5600	6020	7.39%	40%	----
		Selenium	7782-49-2	E440	0.20	mg/kg	0.44	0.42	0.02	Diff <2x LOR	----
		Silver	7440-22-4	E440	0.10	mg/kg	7.78	54.7	150%	40%	DUP-H
		Sodium	7440-23-5	E440	50	mg/kg	14500	16200	10.8%	40%	----
		Strontium	7440-24-6	E440	0.50	mg/kg	350	306	13.2%	40%	----
		Sulfur	7704-34-9	E440	1000	mg/kg	10800	13400	21.5%	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	132	144	9.30%	40%	----
		Titanium	7440-32-6	E440	1.0	mg/kg	405	268	40.7%	40%	DUP-H
		Tungsten	7440-33-7	E440	0.50	mg/kg	16.5	18.2	10.0%	30%	----
Uranium	7440-61-1	E440	0.050	mg/kg	1.62	1.72	5.58%	30%	----		
Vanadium	7440-62-2	E440	0.20	mg/kg	31.7	28.8	9.81%	30%	----		
Zinc	7440-66-6	E440	2.0	mg/kg	3040	4910	47.2%	30%	DUP-H		
Zirconium	7440-67-7	E440	1.0	mg/kg	3.4	2.6	0.8	Diff <2x LOR	----		
<b>Metals (QC Lot: 2261526)</b>											
VA25C5885-005	BA 25-39-A-5 UNPROCESSED Sept 21 to Sept 24	Mercury	7439-97-6	E510	0.0500	mg/kg	<0.0500	<0.0500	0	Diff <2x LOR	----
<b>TCLP Metals (QC Lot: 2257502)</b>											
VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	Mercury, TCLP	7439-97-6	E512	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
<b>TCLP Metals (QC Lot: 2257503)</b>											
VA25C5885-009	BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24	Mercury, TCLP	7439-97-6	E512	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
<b>TCLP Metals (QC Lot: 2257504)</b>											



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
<b>TCLP Metals (QC Lot: 2257504) - continued</b>											
VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	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	1.79	1.71	0.08	Diff <2x LOR	----
		Cadmium, TCLP	7440-43-9	E444	0.050	mg/L	0.100	0.101	0.0004	Diff <2x LOR	----
		Calcium, TCLP	7440-70-2	E444	10	mg/L	1700	1610	5.41%	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	1.10	1.11	0.278%	30%	----
		Copper, TCLP	7440-50-8	E444	0.050	mg/L	1.71	1.50	13.5%	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	0.32	<0.25	0.07	Diff <2x LOR	----
		Magnesium, TCLP	7439-95-4	E444	2.5	mg/L	113	114	1.04%	30%	----
		Nickel, TCLP	7440-02-0	E444	0.25	mg/L	0.50	0.50	0.0001	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	28.1	28.6	1.71%	30%	----		
Zirconium, TCLP	7440-67-7	E444	10	mg/L	<10	<10	0	Diff <2x LOR	----		
<b>TCLP Metals (QC Lot: 2257506)</b>											
VA25C5885-009	BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24	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	0.53	0.55	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	657	687	4.52%	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	0.955	0.962	0.792%	30%	----



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
<b>TCLP Metals (QC Lot: 2257506) - continued</b>											
VA25C5885-009	BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24	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	<2.5	<2.5	0	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	----
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
<b>Physical Tests (QCLot: 2261519)</b>						
Moisture	---	E144	0.25	%	<0.25	---
<b>Physical Tests (QCLot: 2261528)</b>						
Moisture	---	E144	0.25	%	<0.25	---
<b>Metals (QCLot: 2261516)</b>						
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
<b>Metals (QCLot: 2261516) - continued</b>						
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	----
<b>Metals (QCLot: 2261517)</b>						
Mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	----
<b>Metals (QCLot: 2261525)</b>						
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	----



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Metals (QCLot: 2261525) - continued</b>						
Thallium	7440-28-0	E440	0.05	mg/kg	<0.050	----
Tin	7440-31-5	E440	2	mg/kg	<2.0	----
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	----
<b>Metals (QCLot: 2261526)</b>						
Mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	----
<b>TCLP Metals (QCLot: 2257502)</b>						
Mercury, TCLP	7439-97-6	E512	0.001	mg/L	<0.0010	----
<b>TCLP Metals (QCLot: 2257503)</b>						
Mercury, TCLP	7439-97-6	E512	0.001	mg/L	<0.0010	----
<b>TCLP Metals (QCLot: 2257504)</b>						
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	----



Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>TCLP Metals (QCLot: 2257504) - continued</b>						
Zirconium, TCLP	7440-67-7	E444	10	mg/L	<10	----
<b>TCLP Metals (QCLot: 2257506)</b>						
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
<b>Physical Tests (QCLot: 2261518)</b>									
pH (1:2 soil:water)	---	E108	---	pH units	6 pH units	101	95.0	105	---
<b>Physical Tests (QCLot: 2261519)</b>									
Moisture	---	E144	0.25	%	50 %	100	90.0	110	---
<b>Physical Tests (QCLot: 2261527)</b>									
pH (1:2 soil:water)	---	E108	---	pH units	6 pH units	101	95.0	105	---
<b>Physical Tests (QCLot: 2261528)</b>									
Moisture	---	E144	0.25	%	50 %	100	90.0	110	---
<b>Metals (QCLot: 2261516)</b>									
Aluminum	7429-90-5	E440	50	mg/kg	200 mg/kg	100	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	104	80.0	120	---
Barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	104	80.0	120	---
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	106	80.0	120	---
Bismuth	7440-69-9	E440	0.2	mg/kg	100 mg/kg	97.3	80.0	120	---
Boron	7440-42-8	E440	5	mg/kg	100 mg/kg	103	80.0	120	---
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	102	80.0	120	---
Calcium	7440-70-2	E440	50	mg/kg	5000 mg/kg	103	80.0	120	---
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	100	80.0	120	---
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	102	80.0	120	---
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	101	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	101	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	111	80.0	120	---
Manganese	7439-96-5	E440	1	mg/kg	25 mg/kg	103	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	101	80.0	120	---
Phosphorus	7723-14-0	E440	50	mg/kg	1000 mg/kg	106	80.0	120	---
Potassium	7440-09-7	E440	100	mg/kg	5000 mg/kg	103	80.0	120	---
Selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	99.4	80.0	120	---
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	94.1	80.0	120	---
Sodium	7440-23-5	E440	50	mg/kg	5000 mg/kg	104	80.0	120	---



Sub-Matrix: Soil/Solid

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike		Recovery (%)		Recovery Limits (%)		Qualifier
					Target Concentration	LCS	Low	High			
<b>Metals (QCLot: 2261516) - continued</b>											
Strontium	7440-24-6	E440	0.5	mg/kg	25 mg/kg	107	80.0	120	---		
Sulfur	7704-34-9	E440	1000	mg/kg	5000 mg/kg	103	80.0	120	---		
Thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	96.1	80.0	120	---		
Tin	7440-31-5	E440	2	mg/kg	50 mg/kg	102	80.0	120	---		
Titanium	7440-32-6	E440	1	mg/kg	25 mg/kg	100	80.0	120	---		
Tungsten	7440-33-7	E440	0.5	mg/kg	10 mg/kg	99.3	80.0	120	---		
Uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	107	80.0	120	---		
Vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	102	80.0	120	---		
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	100	80.0	120	---		
Zirconium	7440-67-7	E440	1	mg/kg	10 mg/kg	106	80.0	120	---		
<b>Metals (QCLot: 2261517)</b>											
Mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	96.6	80.0	120	---		
<b>Metals (QCLot: 2261525)</b>											
Aluminum	7429-90-5	E440	50	mg/kg	200 mg/kg	110	80.0	120	---		
Antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	110	80.0	120	---		
Arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	106	80.0	120	---		
Barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	106	80.0	120	---		
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	99.5	80.0	120	---		
Bismuth	7440-69-9	E440	0.2	mg/kg	100 mg/kg	105	80.0	120	---		
Boron	7440-42-8	E440	5	mg/kg	100 mg/kg	95.2	80.0	120	---		
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	106	80.0	120	---		
Calcium	7440-70-2	E440	50	mg/kg	5000 mg/kg	99.4	80.0	120	---		
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	103	80.0	120	---		
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	104	80.0	120	---		
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	103	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	105	80.0	120	---		
Lithium	7439-93-2	E440	2	mg/kg	25 mg/kg	103	80.0	120	---		
Magnesium	7439-95-4	E440	20	mg/kg	5000 mg/kg	108	80.0	120	---		
Manganese	7439-96-5	E440	1	mg/kg	25 mg/kg	102	80.0	120	---		
Molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	109	80.0	120	---		
Nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	102	80.0	120	---		
Phosphorus	7723-14-0	E440	50	mg/kg	1000 mg/kg	107	80.0	120	---		
Potassium	7440-09-7	E440	100	mg/kg	5000 mg/kg	105	80.0	120	---		
Selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	101	80.0	120	---		
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	101	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
<b>Metals (QCLot: 2261525) - continued</b>									
Sodium	7440-23-5	E440	50	mg/kg	5000 mg/kg	104	80.0	120	----
Strontium	7440-24-6	E440	0.5	mg/kg	25 mg/kg	110	80.0	120	----
Sulfur	7704-34-9	E440	1000	mg/kg	5000 mg/kg	105	80.0	120	----
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	104	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	106	80.0	120	----
Uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	104	80.0	120	----
Vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	105	80.0	120	----
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	101	80.0	120	----
Zirconium	7440-67-7	E440	1	mg/kg	10 mg/kg	110	80.0	120	----
<b>Metals (QCLot: 2261526)</b>									
Mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	92.0	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
<b>TCLP Metals (QCLot: 2257502)</b>										
VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	Mercury, TCLP	7439-97-6	E512	0.0028 mg/L	0.003 mg/L	95.1	50.0	140	----
<b>TCLP Metals (QCLot: 2257503)</b>										
VA25C5885-009	BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24	Mercury, TCLP	7439-97-6	E512	0.0030 mg/L	0.003 mg/L	98.6	50.0	140	----
<b>TCLP Metals (QCLot: 2257504)</b>										
VA25C5885-001	BA 25-39-A-1 UNPROCESSED Sept 21 to Sept 24	Antimony, TCLP	7440-36-0	E444	4.92 mg/L	5 mg/L	98.3	50.0	140	----
		Arsenic, TCLP	7440-38-2	E444	4.9 mg/L	5 mg/L	97.5	50.0	140	----
		Barium, TCLP	7440-39-3	E444	13.0 mg/L	12.5 mg/L	104	50.0	140	----
		Beryllium, TCLP	7440-41-7	E444	0.235 mg/L	0.25 mg/L	94.1	50.0	140	----
		Boron, TCLP	7440-42-8	E444	10.1 mg/L	10 mg/L	101	50.0	140	----
		Cadmium, TCLP	7440-43-9	E444	0.242 mg/L	0.25 mg/L	96.7	50.0	140	----
		Calcium, TCLP	7440-70-2	E444	ND mg/L	----	ND	50.0	140	----
		Chromium, TCLP	7440-47-3	E444	1.18 mg/L	1.25 mg/L	94.7	50.0	140	----
		Cobalt, TCLP	7440-48-4	E444	ND mg/L	----	ND	50.0	140	----
		Copper, TCLP	7440-50-8	E444	2.20 mg/L	2.5 mg/L	88.1	50.0	140	----
		Iron, TCLP	7439-89-6	E444	232 mg/L	250 mg/L	92.7	50.0	140	----
		Lead, TCLP	7439-92-1	E444	9.52 mg/L	10 mg/L	95.2	50.0	140	----
		Magnesium, TCLP	7439-95-4	E444	251 mg/L	250 mg/L	100	50.0	140	----
		Nickel, TCLP	7440-02-0	E444	2.44 mg/L	2.5 mg/L	97.7	50.0	140	----
		Selenium, TCLP	7782-49-2	E444	5.02 mg/L	5 mg/L	100	50.0	140	----
		Silver, TCLP	7440-22-4	E444	0.096 mg/L	0.1 mg/L	96.5	50.0	140	----
		Thallium, TCLP	7440-28-0	E444	4.8 mg/L	5 mg/L	95.0	50.0	140	----
		Uranium, TCLP	7440-61-1	E444	5.10 mg/L	5 mg/L	102	50.0	150	----
Vanadium, TCLP	7440-62-2	E444	0.74 mg/L	0.75 mg/L	98.7	50.0	140	----		
Zinc, TCLP	7440-66-6	E444	ND mg/L	----	ND	50.0	140	----		
Zirconium, TCLP	7440-67-7	E444	0.8 mg/L	1 mg/L	82.9	50.0	150	----		
<b>TCLP Metals (QCLot: 2257506)</b>										
VA25C5885-009	BA 25-39-A-9 UNPROCESSED Sept 21 to Sept 24	Antimony, TCLP	7440-36-0	E444	4.70 mg/L	5 mg/L	94.0	50.0	140	----
		Arsenic, TCLP	7440-38-2	E444	4.6 mg/L	5 mg/L	91.4	50.0	140	----
		Barium, TCLP	7440-39-3	E444	12.3 mg/L	12.5 mg/L	98.6	50.0	140	----
		Beryllium, TCLP	7440-41-7	E444	0.218 mg/L	0.25 mg/L	87.1	50.0	140	----
		Boron, TCLP	7440-42-8	E444	9.13 mg/L	10 mg/L	91.3	50.0	140	----
		Cadmium, TCLP	7440-43-9	E444	0.226 mg/L	0.25 mg/L	90.2	50.0	140	----
		Calcium, TCLP	7440-70-2	E444	ND mg/L	----	ND	50.0	140	----
		Chromium, TCLP	7440-47-3	E444	1.12 mg/L	1.25 mg/L	89.4	50.0	140	----



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
<b>TCLP Metals (QCLot: 2257506) - continued</b>										
VA25C5885-009	BA 25-39-A-9	Cobalt, TCLP	7440-48-4	E444	0.224 mg/L	0.25 mg/L	89.8	50.0	140	----
	UNPROCESSED Sept 21	Copper, TCLP	7440-50-8	E444	2.19 mg/L	2.5 mg/L	87.5	50.0	140	----
	to Sept 24	Iron, TCLP	7439-89-6	E444	220 mg/L	250 mg/L	88.0	50.0	140	----
		Lead, TCLP	7439-92-1	E444	8.97 mg/L	10 mg/L	89.7	50.0	140	----
		Magnesium, TCLP	7439-95-4	E444	236 mg/L	250 mg/L	94.3	50.0	140	----
		Nickel, TCLP	7440-02-0	E444	2.26 mg/L	2.5 mg/L	90.4	50.0	140	----
		Selenium, TCLP	7782-49-2	E444	4.71 mg/L	5 mg/L	94.3	50.0	140	----
		Silver, TCLP	7440-22-4	E444	0.090 mg/L	0.1 mg/L	90.6	50.0	140	----
		Thallium, TCLP	7440-28-0	E444	4.5 mg/L	5 mg/L	90.2	50.0	140	----
		Uranium, TCLP	7440-61-1	E444	4.63 mg/L	5 mg/L	92.7	50.0	150	----
		Vanadium, TCLP	7440-62-2	E444	0.69 mg/L	0.75 mg/L	92.1	50.0	140	----
		Zinc, TCLP	7440-66-6	E444	9.14 mg/L	10 mg/L	91.4	50.0	140	----
		Zirconium, TCLP	7440-67-7	E444	0.8 mg/L	1 mg/L	80.0	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:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Metals (QCLot: 2261516)</b>									
QC-2261516-003	MRCA-21	Aluminum	7429-90-5	E440	22500 mg/kg	106	70.0	130	----
QC-2261516-003	MRCA-21	Antimony	7440-36-0	E440	24.8 mg/kg	103	70.0	130	----
QC-2261516-003	MRCA-21	Arsenic	7440-38-2	E440	21.2 mg/kg	98.9	70.0	130	----
QC-2261516-003	MRCA-21	Barium	7440-39-3	E440	788 mg/kg	98.5	70.0	130	----
QC-2261516-003	MRCA-21	Beryllium	7440-41-7	E440	1.82 mg/kg	114	70.0	130	----
QC-2261516-003	MRCA-21	Bismuth	7440-69-9	E440	1.78 mg/kg	# 145	70.0	130	RRQC
QC-2261516-003	MRCA-21	Cadmium	7440-43-9	E440	2.15 mg/kg	107	70.0	130	----
QC-2261516-003	MRCA-21	Calcium	7440-70-2	E440	4900 mg/kg	108	70.0	130	----
QC-2261516-003	MRCA-21	Chromium	7440-47-3	E440	56.9 mg/kg	101	70.0	130	----
QC-2261516-003	MRCA-21	Cobalt	7440-48-4	E440	32 mg/kg	101	70.0	130	----
QC-2261516-003	MRCA-21	Copper	7440-50-8	E440	969 mg/kg	101	70.0	130	----
QC-2261516-003	MRCA-21	Iron	7439-89-6	E440	32700 mg/kg	103	70.0	130	----
QC-2261516-003	MRCA-21	Lead	7439-92-1	E440	919 mg/kg	96.4	70.0	130	----
QC-2261516-003	MRCA-21	Lithium	7439-93-2	E440	47.3 mg/kg	116	70.0	130	----
QC-2261516-003	MRCA-21	Magnesium	7439-95-4	E440	7780 mg/kg	106	70.0	130	----
QC-2261516-003	MRCA-21	Manganese	7439-96-5	E440	8640 mg/kg	98.8	70.0	130	----
QC-2261516-003	MRCA-21	Molybdenum	7439-98-7	E440	25.1 mg/kg	104	70.0	130	----
QC-2261516-003	MRCA-21	Nickel	7440-02-0	E440	1000 mg/kg	103	70.0	130	----
QC-2261516-003	MRCA-21	Phosphorus	7723-14-0	E440	660 mg/kg	101	70.0	130	----
QC-2261516-003	MRCA-21	Potassium	7440-09-7	E440	10800 mg/kg	103	70.0	130	----
QC-2261516-003	MRCA-21	Selenium	7782-49-2	E440	1.04 mg/kg	93.7	60.0	140	----
QC-2261516-003	MRCA-21	Silver	7440-22-4	E440	8.98 mg/kg	99.5	70.0	130	----
QC-2261516-003	MRCA-21	Sodium	7440-23-5	E440	1770 mg/kg	112	70.0	130	----
QC-2261516-003	MRCA-21	Strontium	7440-24-6	E440	41 mg/kg	108	70.0	130	----
QC-2261516-003	MRCA-21	Sulfur	7704-34-9	E440	3940 mg/kg	98.4	50.0	150	----
QC-2261516-003	MRCA-21	Thallium	7440-28-0	E440	0.907 mg/kg	96.0	70.0	130	----
QC-2261516-003	MRCA-21	Tin	7440-31-5	E440	3.79 mg/kg	103	40.0	160	----
QC-2261516-003	MRCA-21	Titanium	7440-32-6	E440	2790 mg/kg	105	70.0	130	----
QC-2261516-003	MRCA-21	Tungsten	7440-33-7	E440	6.99 mg/kg	117	70.0	130	----
QC-2261516-003	MRCA-21	Uranium	7440-61-1	E440	3.97 mg/kg	105	70.0	130	----
QC-2261516-003	MRCA-21	Vanadium	7440-62-2	E440	66.2 mg/kg	99.7	70.0	130	----
QC-2261516-003	MRCA-21	Zinc	7440-66-6	E440	828 mg/kg	99.7	70.0	130	----
QC-2261516-003	MRCA-21	Zirconium	7440-67-7	E440	6.91 mg/kg	110	70.0	130	----



Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Metals (QCLot: 2261517)</b>									
QC-2261517-003	MRCA-21	Mercury	7439-97-6	E510	0.068 mg/kg	93.8	70.0	130	----
<b>Metals (QCLot: 2261525)</b>									
QC-2261525-003	MRCA-21	Aluminum	7429-90-5	E440	22500 mg/kg	116	70.0	130	----
QC-2261525-003	MRCA-21	Antimony	7440-36-0	E440	24.8 mg/kg	113	70.0	130	----
QC-2261525-003	MRCA-21	Arsenic	7440-38-2	E440	21.2 mg/kg	99.1	70.0	130	----
QC-2261525-003	MRCA-21	Barium	7440-39-3	E440	788 mg/kg	104	70.0	130	----
QC-2261525-003	MRCA-21	Beryllium	7440-41-7	E440	1.82 mg/kg	109	70.0	130	----
QC-2261525-003	MRCA-21	Bismuth	7440-69-9	E440	1.78 mg/kg	# 133	70.0	130	MES
QC-2261525-003	MRCA-21	Cadmium	7440-43-9	E440	2.15 mg/kg	106	70.0	130	----
QC-2261525-003	MRCA-21	Calcium	7440-70-2	E440	4900 mg/kg	105	70.0	130	----
QC-2261525-003	MRCA-21	Chromium	7440-47-3	E440	56.9 mg/kg	105	70.0	130	----
QC-2261525-003	MRCA-21	Cobalt	7440-48-4	E440	32 mg/kg	106	70.0	130	----
QC-2261525-003	MRCA-21	Copper	7440-50-8	E440	969 mg/kg	103	70.0	130	----
QC-2261525-003	MRCA-21	Iron	7439-89-6	E440	32700 mg/kg	102	70.0	130	----
QC-2261525-003	MRCA-21	Lead	7439-92-1	E440	919 mg/kg	96.8	70.0	130	----
QC-2261525-003	MRCA-21	Lithium	7439-93-2	E440	47.3 mg/kg	106	70.0	130	----
QC-2261525-003	MRCA-21	Magnesium	7439-95-4	E440	7780 mg/kg	109	70.0	130	----
QC-2261525-003	MRCA-21	Manganese	7439-96-5	E440	8640 mg/kg	101	70.0	130	----
QC-2261525-003	MRCA-21	Molybdenum	7439-98-7	E440	25.1 mg/kg	107	70.0	130	----
QC-2261525-003	MRCA-21	Nickel	7440-02-0	E440	1000 mg/kg	102	70.0	130	----
QC-2261525-003	MRCA-21	Phosphorus	7723-14-0	E440	660 mg/kg	108	70.0	130	----
QC-2261525-003	MRCA-21	Potassium	7440-09-7	E440	10800 mg/kg	108	70.0	130	----
QC-2261525-003	MRCA-21	Selenium	7782-49-2	E440	1.04 mg/kg	106	60.0	140	----
QC-2261525-003	MRCA-21	Silver	7440-22-4	E440	8.98 mg/kg	105	70.0	130	----
QC-2261525-003	MRCA-21	Sodium	7440-23-5	E440	1770 mg/kg	119	70.0	130	----
QC-2261525-003	MRCA-21	Strontium	7440-24-6	E440	41 mg/kg	111	70.0	130	----
QC-2261525-003	MRCA-21	Sulfur	7704-34-9	E440	3940 mg/kg	113	50.0	150	----
QC-2261525-003	MRCA-21	Thallium	7440-28-0	E440	0.907 mg/kg	103	70.0	130	----
QC-2261525-003	MRCA-21	Tin	7440-31-5	E440	3.79 mg/kg	106	40.0	160	----
QC-2261525-003	MRCA-21	Titanium	7440-32-6	E440	2790 mg/kg	108	70.0	130	----
QC-2261525-003	MRCA-21	Tungsten	7440-33-7	E440	6.99 mg/kg	126	70.0	130	----
QC-2261525-003	MRCA-21	Uranium	7440-61-1	E440	3.97 mg/kg	98.5	70.0	130	----
QC-2261525-003	MRCA-21	Vanadium	7440-62-2	E440	66.2 mg/kg	105	70.0	130	----
QC-2261525-003	MRCA-21	Zinc	7440-66-6	E440	828 mg/kg	101	70.0	130	----
QC-2261525-003	MRCA-21	Zirconium	7440-67-7	E440	6.91 mg/kg	111	70.0	130	----
<b>Metals (QCLot: 2261526)</b>									
QC-2261526-003	MRCA-21	Mercury	7439-97-6	E510	0.068 mg/kg	92.1	70.0	130	----



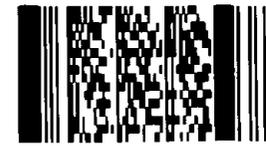
## Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
RRQC	Refer to report comments for information regarding this QC result.



<b>Report To</b>		<b>Report Format / Distribution</b>		<b>Service Requested</b> (Rush for routine analysis subject to availability)	
Company:	Veolia Canada / Burnaby Waste To Energy Facility	"Veolia Email Distribution List" please			
Contact:	Brian Graham / Darcie Grace				
Address:	5150 Riverbend Drive Burnaby BC	Email 1:	Darcie.grace@veolia.com		
Phone:	604-521-1025 Fax:	Email 2:	lorenzo.ilao@veolia.com		
		Email 3:	karen.thomquist@veolia.com	<b>Analysis</b>	
			brent.kirkpatrick@metrovancover.org		
			Sarah.Wellman@metrovancover.org		

Environmental Division  
 Vancouver  
 Work Order Reference  
**VA25C5885**



Telephone : +1 604 253 4188

<b>Invoice To</b>		<b>Client / Project Information</b>		Please indicate below Filtered, P	
Same as Report?	Veolia Water Canada	Job #:	Veolia Weekly Bottom Ash - Suite		
<b>Hardcopy of Invoice with Report?</b>		PO / AFE:	PO#		
Company:	Veolia Water Canada / Burnaby Waste To Energy	LSD:	!(includes 2:1 pH)		
Contact:	Danny George, Purchaser/Darcie Grace, SHE Manager				
Address:	5150 Riverbend Drive, Burnaby BC V3N 4V3				
Phone:	604 521 1025 Fax:	Quote #:			

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 2539-A-1 UNPROCESSED Sept 21 to Sept 24			Soil	X	X			X		1
	BA 2539-A-2 UNPROCESSED Sept 21 to Sept 24			Soil	X	X			X		1
	BA 2539-A-3 UNPROCESSED Sept 21 to Sept 24			Soil	X	X			X		1
	BA 2539-A-4 UNPROCESSED Sept 21 to Sept 24			Soil	X	X			X		1
	BA 2539-A-5 UNPROCESSED Sept 21 to Sept 24			Soil	X	X			X		1
	BA 2539-A-6 UNPROCESSED Sept 21 to Sept 24			Soil	X	X			X		1
	BA 2539-A-7 UNPROCESSED Sept 21 to Sept 24			Soil	X	X			X		1
	BA 2539-A-8 UNPROCESSED Sept 21 to Sept 24			Soil	X	X			X		1
	BA 2539-A-9 UNPROCESSED Sept 21 to Sept 24			Soil	X	X			X		1
	BA 2539-A-10 UNPROCESSED Sept 21 to Sept 24			Soil	X	X			X		1
	BA 2539-A-11 UNPROCESSED Sept 21 to Sept 24			Soil	X	X			X		1
	BA 2539-A-12 UNPROCESSED Sept 21 to Sept 24			Soil	X	X			X		1
	Water Aquatic										

<b>SHIPMENT RECEPTION (lab use only)</b>		<b>SHIPMENT VERIFICATION (lab use only)</b>								
Released by:	Date (dd-mm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
<i>[Signature]</i>	11/10/25	08:00	<i>[Signature]</i>	Oct 1	12:15	19° C				

Unprocessed

Bottom Ash Sampling

**Bottom Ash Worksheet**

Date sample composited (DD/MM/YYYY)	Sept 21-24 2025
Person doing the sampling	Steve McNutt
Total Sample Weight before processing, kg	38.43 Kg
Weight of Material >3/8", kg	23.2 Kg
Weight of Material that cannot be processed to <3/8" (metal, wood, etc), kg	21.2 Kg
Final Total weight of Processed Bottom Ash, kg	17.23 Kg

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

**Fill twelve bags with approximately <sup>500g</sup> ~~2000g~~ of mixed bottom ash and label each with "Bottom Ash" and the week the ash composite is from, i.e. "June 9-15, 2019"**